SOUTH MARKETING ISSUE
Pages 9-16

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Soil Scientists, Industry, Confer In Joint Meeting

NPFI Midwest Regional Conference Brings Out Many Sales Potentials

CHICAGO—A roundup of information on agronomic research, fertilizer application techniques, soil fertility research, economics, and reports on the attitude of farmers of the Midwest toward fertilizers were main topics for discussion at the tenth annual joint meeting of college agronomists with the fertilizer industry at the Edgewater Beach Hotel here Feb. 13-14.

The meeting, sponsored by the Midwest Regional Office of the National Plant Food Institute (formerly the Middle West Soil Improvement Committee) was attended by more than 700 persons representing a broad cross-section of the fertilizer industry and agricultural college personnel.

Results of a survey made for NPFI by National Analysts, Inc. to determine the attitude of Midwestern farmers toward fertilizers was presented by Zenas H. Beers, Middle West regional director, NPFI, Chicago, and M. S. Williams, chief economist, NPFI, Washington. (Croplife, Feb. 17, page 1.) Another report on the attitudes of dealers toward fertilizer was made by George M. Beal and Joseph M. Bohlen, Iowa State College, to round out that portion of the session.

Dr. Floyd Smith, Kansas State Col-

(Continued on page 20)

How Farmers Regard Fertilizer Shown in NPFI Survey Results

WASHINGTON—A set of new horizons has been established for the fertilizer industry in the reports being presented by the National Plant Food Institute from the farm study made for it by National Analysts, Inc.

Information on farmer's attitudes toward the use of fertilizer and why he may not be using as much as he should, give the industry a rare insight on how fertilizer users react, how they think, and what they are doing. Not only are new horizons projected, but a sharper focus is made possible on old horizons.

Here are some of the facts unearthed by the survey and presented to the trade by the NPFI staff. The differences between a "high-level" fertilizer and the farmer who uses little fertilizer are outlined as follows:

The high-level user is younger; only about 42% were 50 years old or older compared with 54% for non-users.

He has a better education; 50% had gone to high school; 14% had at least some college training. Only 34% of non-users attended high school and only 7% college.

He has higher income; 74% reported gross income of $5,000 or more as compared with 55% of non-users.

He has a bigger capital investment; 71% reported capital investments over $25,000 as compared with 63% of non-users.

He makes more money an acre; an average of $66.00 an acre gross income as compared with $37.00 for non-users and the national average for all farmers of only $46.00.

What, in his opinion, makes a

(Continued on page 8)

★ ★ ★

Soil Tests, Demonstrations Rate High in Helping Farmer Make Up Mind on Fertilizer

WASHINGTON — Steps taken by farmers in first deciding how much and what kind of fertilizer to use were outlined in the NPFI survey which showed that soil tests rate quite high in giving the user a basis for decision. However, about half of all farmers say they rely on their own judgment, trial and error, or recommendations of other farmers, in addition to their referring to soil tests.

That farmers believe in soil tests was indicated by the fact that 59% of fertilizer users and nearly half of all farmers reported have had their soil tested. Of these who said they had not had their soil tested, half admitted that this was because of their own negligence.

While 71% of high-level users said they followed soil test recommendations completely, 53% of low-level users also said they followed recommendations completely. This information raises the possibility that many farmers only thought they were following recommendations, and indicates the desirability of a continuing review of soil test administrative procedures and methods of presenting recommendations.

The average farmer is more likely to believe results and adopt practices he can see and interpret in terms of his own farming operations, the survey found. He relies heavily on his own experience and judgment and upon the advice of neighbors. He thinks farmers would be favorably influenced by seeing fertilizer demonstration plots. (Nearly three-fourths of all farmers thought that seeing demonstrations would have a good or positive effect.)

About one-third said they had read about fertilizer demonstrations, over half of these said the information was helpful, and over one-fourth said it led to further action, only 25% could recall having visited a fertilizer demonstration. Of all farmers, 30% said they had done some experimenting with fertilizer on their own farms. Of these, over three-fourths said the results were helpful, although only 14% said the results led to further

(Continued on page 18)

Grasshopper Threat Shapes Up in Texas

COLLEGE STATION, TEXAS—Cooperative grasshopper adult surveys made during the late summer and fall of 1957 revealed that the Panhandle and upper South Plains counties of Texas may undergo widespread and damaging infestations of grasshoppers this spring.

The survey reveals where and how many grasshoppers infest an area, and indicates the potential severity of infestations for 1958, according to F. M. Fuller, extension entomologist. Surveys next spring for newly hatched grasshoppers will provide a final index of populations and identify areas where control will be necessary to prevent severe losses during the 1958 growing season.

Mr. Fuller says the survey showed infestations in 5,972,000 acres of Texas. This is more than last year when approximately five million acres were infested with the pests. Control was administered to about 50,000 acres in the Panhandle.

Mr. Fuller points out that six or seven grasshoppers per square yard in a pasture can consume grass at about the same rate as a cow. The fall survey showed that many acres in Texas in the regions mentioned nave potential populations of 28 or more per sq. yard.

New Mexico Pesticide Conference Hears Reports on Miller Bill, Pest Damage

A warning to "follow the label" was sounded to growers by R. L. Horst, chief of the Denver District Food and Drug Administration in a talk delivered before delegates to the New Mexico Pesticide Conference at New Mexico A&M College Feb. 6-7.

The conference was attended by 75 wholesale and retail pesticide dealers, manufacturers' representatives, crop and livestock producers and college officials.

"Growers should use materials according to labeled directions in the amount and time specified for application to crops," Mr. Horst said. "Growers have the responsibility of determining what pesticide uses are proper and following them so that they will end up with 'crops that are legal.' If the products contain residues in excess of tolerance such products are subject to seizure and the grower is subject to prosecution."

Mr. Horst defined the Miller Bill as an exercise of the power of Congress over the regulation of interstate commerce in adulterated food. "It is aimed to protect the public health by improving, simplifying and speeding up methods for regulating the amount of residue which may remain in raw agriculture commodities after the use of pesticide chemicals," he said.

Gale F. Hansen, head of Aerial Agricultural Activities for the National Aviation Trades Assn. at Richmond, Cal., outlined problems of crop spraying and dusting. "The toxicity of chemicals stands as one of the biggest concerns of aerial application," he said. He said that "individuals

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SW Entomologists Elect Paul Gregg Chairman for 1958

HOUSTON, TEXAS—Paul Gregg, Klauss-White Co., San Antonio, Texas, was named chairman of the Southwestern Branch of the Entomological Society of America at the group's sixth annual meeting at the Shamrock-Hilton Hotel here Feb. 10-11. He succeeds C. R. Parencia, entomology research division of the U.S. Department of Agriculture, Waco. Other officers elected at the meeting included Manning A. Price, Texas A&M College, vice chairman; H. E. Meadows, Diamond Alkali Co., Houston, secre-

(Continued on page 8)

To Double Capacity

LEWISTON, IDAHO—Charles Fite has announced that his North Idaho Chemical Co. will double plant capacity and production of commercial fertilizer. The firm now produces 3,500 tons of fertilizer each year.

Spencer Honors "Efficient Corn Program" Winners

KANSAS CITY—The Spencer Chemical Co. reports that for the fourth consecutive year farm youths from the Midwest and South have demonstrated that they can be really efficient when it comes to growing corn. Representing 17 states, and varied corn growing situations, a group of 231 vocational agriculture students averaged 99 bu. per acre on acre test plots in an area from Minnesota to Mississippi and Missouri to South Carolina.

The youths, participants in an "efficient corn growing program" sponsored by Spencer, were competing with themselves to see just what could be done to improve their regular corn growing methods. Their success was measured by balancing the improvement in yield and profit on one acre of corn grown with what the boys judged to be "improved" practices against the yield and profit from a "check" acre grown with practices normally used.

Recently 43 of the top participants in the program gathered in Kansas City and Memphis as guests of the company to compare notes on what it takes to be an "efficiency expert" in growing corn. Some of the statistics they came up with were these: Plant food application was increased on the "improved" plots. Nitrogen went from 26 lb. per acre on the "check" plot to 69 on the "improved" plot. Potassium went up from 27 to 53 lb. per acre and potash from 27 to 51 lb.

Other factors mentioned by the boys as yield "boosters" were increased plant population (averaged 13,100 plants per acre on the "improved" plot, 11,480 on the "check"); use of better adapted hybrid seed and increased use of pesticides.

Because they were required to keep accurate records and make specific yield measurements in the program, the boys came up with these "efficiency" statistics: Average yield per acre increased 22 bu. on the "improved" plot. Production costs went up about $13 an acre due to increased use of fertilizer, better seed, etc., but cost per bushel went down due to the increased yield—and most important of all, net profit per acre went up to $50.61—a profit increase of $11.22 over the less costly, but also less efficient "normal" practices plot.

More than 2,000 participants were in the program. Records of those completing the program are screened to select the boys who are tops in efficiency. These boys, together with their vocational agriculture instructors, are annually invited to be guests of Spencer for a 3-day, expense-paid trip to Kansas City or Memphis.

Dr. Geo. C. Schweiker

Velsicol Names New Manager of Research

CHICAGO — Velsicol Chemical Corp. has appointed Dr. George C. Schweiker to the new position of manager of research. Dr. W. P. Utermohlen, Jr., director of research, announced that Dr. Schweiker will be responsible for the basic research programs of the Velsicol research and development department. These will encompass areas of agricultural and industrial chemicals, polymers, organic processes, and other new fields.

Dr. Schweiker comes to Velsicol from Hooker Electrochemical Co. where he served as supervisor of polymer research. Previously, he was an instructor in chemistry at Drexel Institute of Technology in Philadelphia. While teaching at Drexel, Dr. Schweiker received his Ph.D. from Temple University, in 1953.

Smith Company of Uvalde Incorporated

UVALDE, TEXAS—The announcement of the incorporation, under the laws of Texas, of Smith Company of Uvalde here, has been made by S. C. Smith, president of the concern. This new titled business is made up of the Smith Co., a partnership formed in 1948; the Smith Co.—Pearsall Division, a partnership; and Giles Chemical & Fertilizer Co., Inc., of San Antonio, a Texas corporation.

This corporation will be headed by S. C. Smith, president; W. W. Plowman, Jr., vice president, and D. H. Speir, secretary-treasurer.

The Smith Co. has been in the insecticide and fertilizer business of southwest Texas for 10 years. The firm is manufacturer of insecticides and has pioneered the use of anhydrous ammonia.

The firm is also distributor for California Spray-Chemical Corp., Dow Chemical Co., Phillips Petroleum Co., Rohm & Haas, Chemagro Corp., Geigy Agricultural Chemicals, Inc. and others.

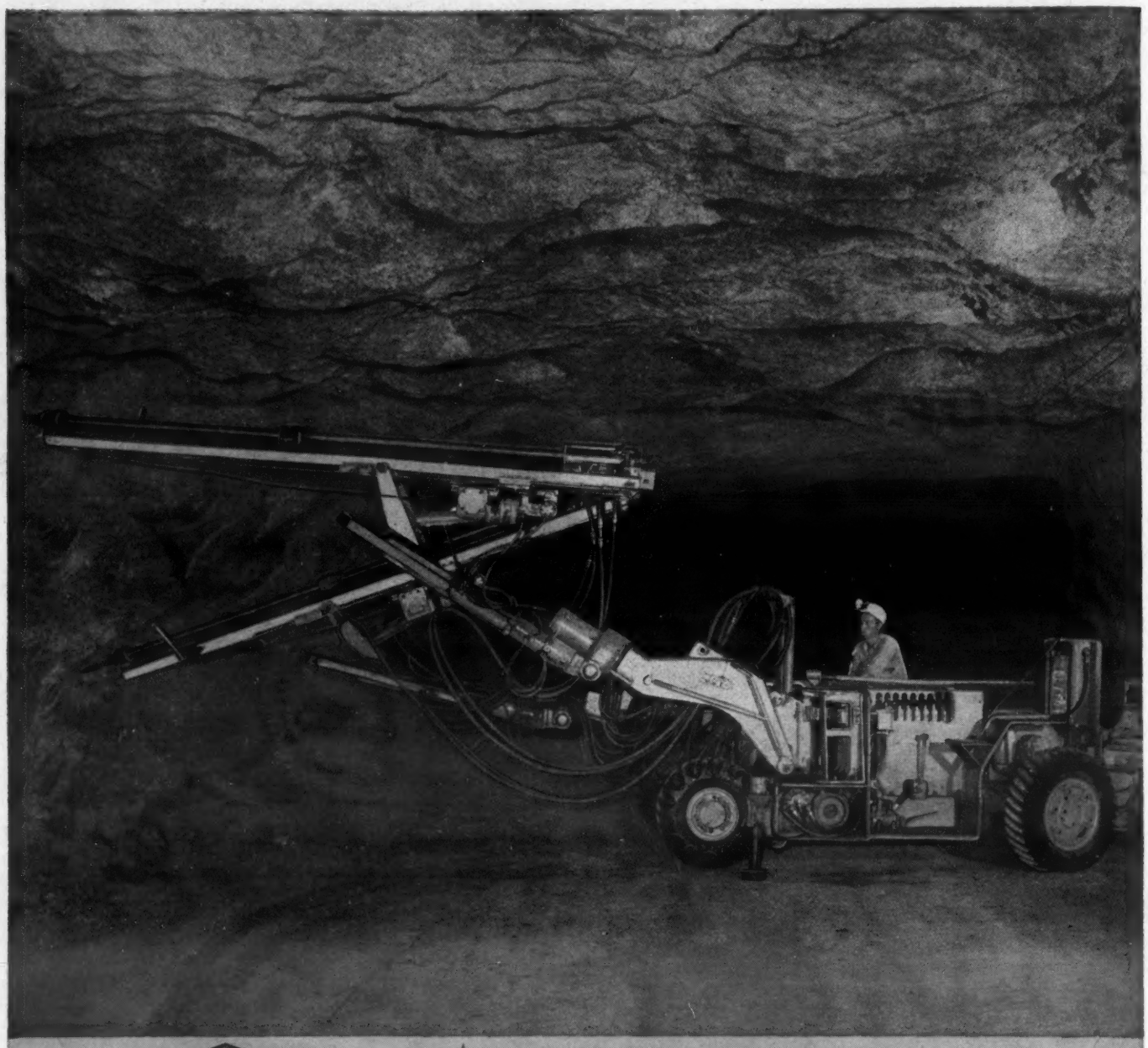
New Nematode Found In California Citrus

BERKELEY, CAL.—A new nematode has been found in California citrus.

Seymour D. Van Gundy, junior nematologist on the University of California's Riverside campus, discovered the new species in collections made by Dean Halsey, Riverside County farm adviser.

Attacking the roots of young rough lemon trees in Coachella Valley, the tiny, eel-like pest appears to cause an abnormal galling of the root tips, Mr. Van Gundy reports. What effect this severe galling has on the growth and productiveness of citrus is being investigated at Riverside.

The new nematode, as yet unnamed, belongs to the genus Hemicycliophora. This group is suspected of being an important pest of many crops.



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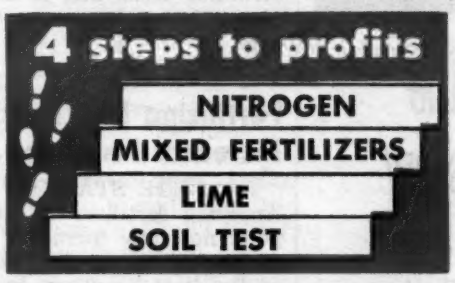

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C-I-L Anhydrous Plant on Stream

MILLHAVEN, ONT.—The $9,000,000 anhydrous ammonia plant of Canadian Industries Limited here, is now in commercial production, J. D. Converse, general manager of C-I-L's chemicals division, has announced.

The new plant employs the latest industrial techniques for ammonia synthesis and is the only one of its kind in Canada using fuel oil as a raw material, Mr. Converse said. The plant occupies 10 acres adjacent to the company's "Terylene" polyester fibre plant located on Lake Ontario 13 miles west of Kingston. Daily production capacity is 200 tons.

The plant has 90 employees and is operated on a continuous basis. A. A. Perley is plant superintendent and H. M. Sherwood is manager of C-I-L's entire Millhaven works. The services of Dr. Thomas W. Beak, Ottawa biologist, have been retained to keep a constant check on pollution control in Lake Ontario near the Millhaven works.

J. A. White, Jr., Chase Dallas Manager, Dies

NEW YORK—J. A. White, Jr., 43, manager of the Chase Bag Co. branch in Dallas, Texas, died recently in New York while on a trip to the firm's executive offices. Death was attributed to complications of acute bronchial pneumonia. Funeral services were held in Richmond, Va., with burial in Forest Lawn Cemetery.

A veteran of over 20 years in the bag business, Mr. White was active in industry affairs. He was well known among buyers, especially in the seed, milling and produce trade, and managed the Chase sales office in Richmond from 1952 to 1957. He had been promoted to manager of the firm's manufacturing facility in Dallas last July.

Mr. White was born in Memphis and moved to Richmond in 1932 where he entered the bag business with Millhiser Bag Co. and Strong Bag Co. He is survived by his wife, Margaret, and two sisters, Mrs. Robert M. Wallace and Mrs. George V. Hudgins, all of Richmond.

New Liquid Plant Completed in Arkansas

PATTERSON, ARK.—Farmers Liquid Fertilizer Co., Inc. has completed a new plant here and is ready for production, Paul Lovett, president and general manager, has announced.

The plant will produce liquid fertilizer which will be sold under the brand name "Gro-Mor." The firm has been licensed by Tennessee Valley Authority to use the TVA liquid fertilizer process.

Ray L. Hobbs

CHIEF ENGINEER — The appointment of Ray L. Hobbs as chief engineer of The Best Fertilizers Co., Oakland, Cal., has been announced by Lowell W. Berry, president. Mr. Hobbs will be in charge of all maintenance and new construction engineering in the present plant at Lathrop, as well as in the new anhydrous ammonia plant now being built. Upon graduation from the University of California with a degree in mechanical engineering, Mr. Hobbs was employed for 7 years by Union Oil of California. As assistant project engineer he served with the Ralph M. Parsons Co. in 1955 for the engineering and construction of a petroleum refinery fluid coker plant. For the past two years he has held the position of project engineer on new construction work and in corrosion and maintenance control for Brea Chemicals.

Fertilizing Fish Pond Increases Fish Food

COLLEGE STATION, TEXAS—Applying fertilizer to the farm fish pond not only increases the amount of food in the water but also is one of the best practices for controlling submerged mosses in the pond, says Ed Cooper, Texas extension wildlife specialist.

The first application of fertilizer should be made immediately, he says. Since the pond water is usually deficient in the same nutrients as is the soil over which the water flows into the pond or tank, Mr. Cooper suggests the use of the same commercial mixture as is used for crops on the farm. An initial application of 100 lb. for each surface acre of water is suggested. This amount should cause a change in the color of the water. This is due to the development of a great amount of plankton which is used for food by the fish and organisms upon which fish feed.

Henry J. Wood Joins Taylor Chemical Co.

ABERDEEN, N.C.—Henry J. Wood of Richmond, Va. has joined the Taylor Chemical Co. here, according to an announcement by F. D. Farrell, manager of the sales department.

Mr. Wood recently retired from the Diamond Black Leaf Co., and he formerly was with the Virginia-Carolina Chemical Corp.

GROWERS TO BE HONORED

FT. COLLINS, COLO. — Topflight corn growers in seven northeastern Colorado counties will be honored at Denver's Cherry Hills Country Club March 1. Sponsor of the achievement banquet will be the American Chemical and Fertilizer Co. Scheduled to attend the event are the three top growers in corn production contests in Morgan, Adams, Boulder, Larimer, Weld, Logan and Sedgwick counties. Trophies will be awarded to the three high producers in the district.

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Delhi-Taylor Oil Plans Development Of Utah Potash

SALT LAKE CITY—New potash discoveries of sufficient magnitude to justify rushing plans for a $20 million mine and mill in eastern Utah have been reported by Delhi-Taylor Oil Corp.

The newly-discovered beds are in the Cane Creek anticline below Dead Horse Point in Utah's Grand County. This is the same general area of Utah's most intense uranium activity.

The firm also has discovered extensive potash beds at Seven Mile anticline about nine miles northwest of Moab, Grand County.

Delhi-Taylor is planning a 6,000 ton-a-day beneficiation plant on Bartlett Point, adjacent to Dead Horse Point where the Colorado River makes a series of snake-like cutbacks. The plant would process the potash ore into potash for agricultural fertilizer.

A shaft would be sunk in the Cane Creek development to reach the potash beds. Company plans call for a 1,200-ft. conveyor belt from the shaft to the processing plant on Bartlett Point.

The entire development currently is hinged on negotiations for marketing the potash.

The Utah situation is complicated by important potash developments in Canada, which is increasing shipments to the eastern and midwestern United States. Communist East Germany also has been reported dumping substantial quantities of potash on the eastern seaboard.

One new Canadian development plans to mine potash through shafts down to 2,800 ft. into the earth. Some of the large beds in the Seven Mile Anticline go down to 3,500 ft.

The tonnage of the new mine and mill would demand the services of a railroad. Hence the oil firm is planning to construct a rail line from near Green River in Utah's Emery County to the Bartlett Point area.

At Green River the Delhi-Taylor line would connect with the Denver & Rio Grande Railroad Co. system. The railroad would move the potash to markets on the eastern side of the Continental Divide.

Plans on the current scale would require the permanent employment of between 300 and 500 persons in mine, mill and transportation operations.

Colorado Faces Alfalfa Weevil Outbreaks

FT. COLLINS, COLO.—Gordon Mickle, extension entomologist of Colorado State University, has warned alfalfa growers of possible losses to alfalfa weevil during the coming season. The insect appears to be building up its numbers in several areas of Colorado, especially in Weld, Morgan, Larimer, Boulder and other northern counties.

The entomologist said that weevil infestations have been light in Colorado during the past two or three years. As a result, growers relaxed their control operations, allowing the weevils to rebuild their strength. An upswing in weevil numbers was noted in 1957. There were sufficient numbers of the insect to cause damage on first and second cuttings of hay in many areas of the state.

TEXAS BULLETINS

COLLEGE STATION, TEXAS—Information and recommendations for the control of the various cotton insects are contained in two leaflets recently released by the Texas Agricultural Extension Service—L-218, "Texas Guide for Controlling Cotton Insects," and L-219, "Ways to Fight the Pink Bollworms in Texas."

7.8 Million Acres Offered For Acreage Reserve

WASHINGTON—Farmers signed applications offering to put a little over 7.8 million "allotment" acres of upland cotton, spring wheat, corn, rice and eligible types of tobacco in the 1958 acreage reserve of the soil bank through Feb. 7, end of the fourth week of signup for spring-planted crops, according to preliminary reports received by the U.S. Department of Agriculture.

Acreage reserve agreement applications covering about 3.9 million acres of 1958 winter wheat were signed by farmers last fall. This, added to more than 737,000 acres of spring wheat reported signed through Feb. 7, gives a total of 4,637,104 acres of all wheat signed. A total of 11,774,736 acres of all basic crops is covered by applications signed so far for the 1958 acreage reserve.

1957 Damage by European Corn Borer

State—	Total state production 1,000 bu.	Estimated data: Value per bushel dollars	Value of production $1,000	Loss of crop: 1,000 bu.	Loss of crop: $1,000
Connecticut	141	1.55	218	2	3
Delaware	3,930	1.33	5,227	133	177
Illinois	510,592	1.01	515,698	10,976	11,085
Indiana	251,812	1.00	251,812	1,498	1,498
Iowa	597,316	.85	507,718	102,166	86,840
Kansas	36,180	1.03	37,265	1,386	1,428
Maryland	11,760	1.35	15,876	244	329
Michigan	74,500	1.08	80,460	102	110
Minnesota	289,536	.80	231,628	9,110	7,288
Missouri	140,492	1.01	141,897	16,399	16,562
Nebraska	215,761	.93	200,657	18,816	17,499
New Jersey	2,400	1.38	3,312	64	89
New York	12,852	1.26	16,193	21	26
North Dakota	14,308	.82	11,732	277	227
Ohio	169,884	1.12	190,270	1,295	1,450
Pennsylvania	38,594	1.40	54,032	684	958
South Dakota	122,199	.72	87,983	16,351	11,773
Vermont	50	1.55	77	Trace	1
Virginia	16,907	1.39	23,501	177	246
West Virginia	5,082	1.37	6,962	61	83
Wisconsin	104,036	1.03	107,157	1,135	1,169
Total	2,618,332	...	2,489,675	180,897	158,841

CORN BORER DAMAGE—The European corn borer chewed its way through almost 181 million bushels of corn, worth $158,841,000, during 1957, according to estimates compiled by the U.S. Department of Agriculture. The loss was almost 85% higher than in 1956 and is the third highest in the past nine years. The state-by-state damage is shown in the USDA chart above.

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STANDARD

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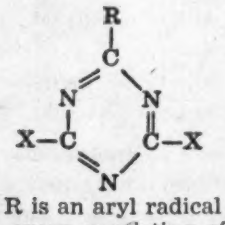
Industry Patents and Trademarks

2,822,313

Fungicidal Compositions Containing Aryl Dihalo Triazines. Patent issued Feb. 4, 1958, to Kenneth G. Nolan, Noroton Heights, Conn., and William B. Hardy, Bound Brook, N.J., assignors to American Cyanamid Co., New York. A preparation for the control of fungi comprising a symmetrical triazine represented by the formula:



in which R is an aryl radical selected from the group consisting of phenyl, naphthyl, alkylphenyl, monohalophenyl, dihalophenyl, hydroxyphenyl, and alkoxyphenyl and X is a halogen selected from the group consisting of chlorine and bromine, and a fungicidal adjuvant therefor, said adjuvant comprising a surface active agent.

2,822,296

Rodent Repellent Material Containing Dodecylamine Acetate. Patent issued Feb. 4, 1958, to John P. Barrett and Ervin W. Segebrecht, Chicago, assignors to Armour & Co., Chicago. Patent comprises rodent-repellent fabrication material consisting of fabrication material containing dodecylamine acetate.

2,823,158

N-Cyanoethylcarbazole for Treating Systemic Plant Diseases. Patent issued Feb. 11, 1958, to Chien-pen Lo, Philadelphia, Pa., assignor to Rohm & Haas Co., Philadelphia. A chemoprophylactic and chemotherapeutic process for immunizing plants against systemic diseases and for curing plants already subjected to such diseases, said process comprising administration of N-cyanoethylcarbazole systemically to a plant through application of the compound to at least one element of the immediate plant environment which is comprised of the plant's leaves, roots and the soil adjacent the plant's roots.

Industry Trade Marks

The following trade marks were published in the Official Gazette of the U.S. Patent Office in compliance with section 12 (a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the Gazette. (See Rules 20.1 to 20.5.) As provided by Section 31 of the act, a fee of $25 must accompany each notice of opposition.

Botane, in capital letters, for plant food. Filed Aug. 20, 1957, by George Koch Sons, Inc., Evansville, Ind. First use July 30, 1957.

Cardboard design, with words Gud-Bi-Fly printed thereon, for insect-destroying device, namely, a cardboard with cotton, treated with insecticide attached thereto. Filed Dec. 22, 1955, by Gud-Bi-Fly Co., Norfolk, Va. First use July 1, 1955.

G-20, in capital letters, for granular insecticide for corn borer control. Filed Feb. 10, 1956, by McConnon & Co., Winona, Minn. First use June 17, 1955.

Peak-O'-Ripeness, in capital letters, for preservative preparation for citrus and other fruits which functions primarily as a fungicide. Filed April 8, 1957, by Monsanto Chemical Co., St. Louis, Mo. First use March 29, 1957.

Siposan, in hand-drawn capital letters, for cationic surface active agents, as germicides and wetting, dispersing and emulsifying agents. Filed May 22, 1957 by American Alcolac Corp., Baltimore, Md. First use on or about March 4, 1957.

Nitra-Tone, in capital letters, for gibberellic acid plant growth stimulant. Filed Aug. 5, 1957, by the Nitragin Co., Inc., Milwaukee, Wis. First use May 24, 1957.

AMPLE COTTONSEED

STATE COLLEGE, MISS.—There should be enough Mississippi-produced cottonseed to plant the state's 1958 crop without importing seed of unknown origins, Dr. Clay Lyle, director of the extension service, has reported. He added that since the 1957 cotton crop had been severely attacked by both leaf and soil diseases, all cottonseed should be delinted and treated with an approved fungicide.

Insect Control Talks Set For Cotton Conference

EL PASO, TEXAS—A cotton farmer and two scientists will team up here March 4-5 to outline progress in fighting cotton insects in the western states. The occasion will be the Western Cotton Production Conference, which is being co-sponsored by the National Cotton Council and the Southwest Five-State Cotton Growers Assn. in cooperation with other groups.

The two scientists are Dr. H. T. Reynolds, entomologist at the California Experiment Station, Riverside, and Dr. J. C. Gaines, head of the department of entomology, Texas A&M College, College Station.

Speaking on new developments in systemic insecticides, Dr. Reynolds will describe the progress in the use of seed treatment, granular side dressing and sprays.

The latest research results on non-systemic insecticides will be described by Dr. Gaines. Following Dr. Gaines on the program, Horton C. Miller of Canutillo, Texas, will tell his experience with modern insect control.

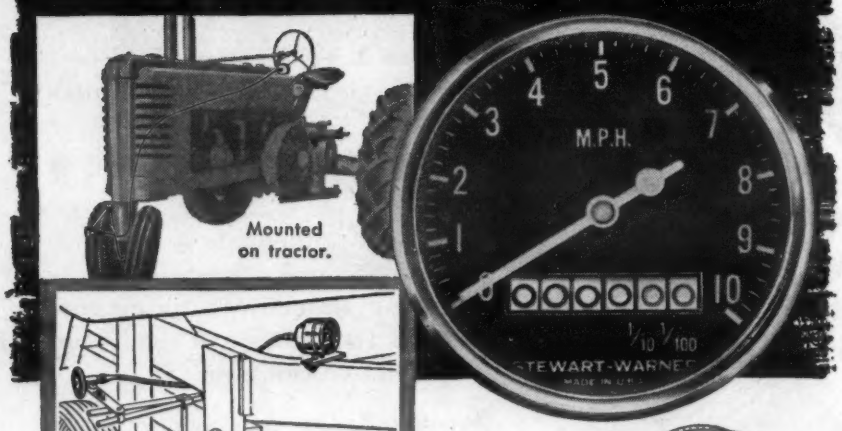
Timing of the beginning and ending of the program, intervals between applications, thoroughness of application, effectiveness, costs and returns are among the topics which Mr. Miller will cover. Headquarters for the conference will be the Hotel Cortez.

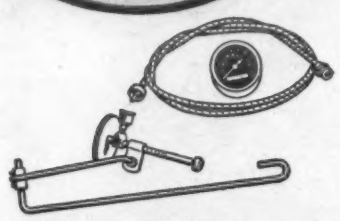
SAVE CROPS AND MATERIALS

with more uniform application of fertilizers, insecticides, weed killers, seeds!

INSTALL A STEWART-WARNER

FARM SPEEDOMETER





Speedometer Kit includes: speedometer head, flexible shaft, mounting and drive equipment, and installation instructions.

A Stewart-Warner Farm Speedometer can pay for itself in one season! *Instantly* shows the speed for most economical coverage! Measures over-the-ground speeds up to 10 miles per hour—with dial subdivided to show gradations of ½ mile per hour. Records distance by showing footage in tenths and hundredths of a mile!

Universal Mounting! Can be easily installed on any wheeled vehicle.

Accurate! Gives true record of speed and distance traveled—regardless of terrain, condition of soil, engine rpm or gear ratio.

Rugged! Weatherproof, shock-resistant. Mechanism enclosed in cadmium-plated steel case.

See your dealer today, or write:

INSTRUMENT DIVISION
STEWART-WARNER CORPORATION
Symbol of SW Excellence

Dept. HH-28
1840 Diversey Parkway
Chicago 14, Illinois

New Facilities in North Carolina Part of Planters Chemical Corp.'s Expansion Plan

NORFOLK, VA.—Planters Chemical Corp. plans to build a new dust blending operation at Fayetteville, N.C., according to an announcement by George Simches, vice president of the firm which headquarters in Norfolk. The 50-year-old company manufactures and distributes insecticides, fungicides and weed killers.

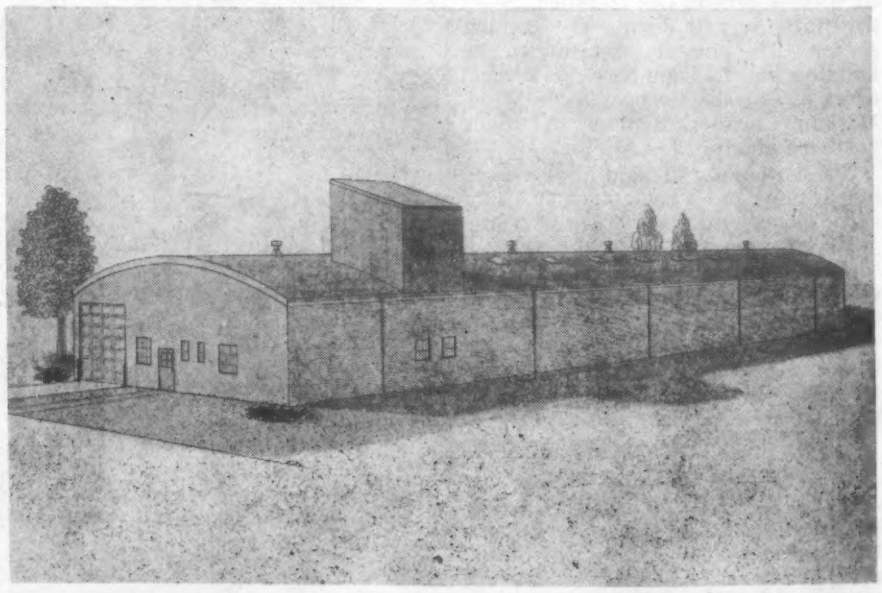
In charge of the new plant, upon its completion early in April, will be Bayard E. Swayne, 38, formerly associated with Rohm & Haas Co. and with California Spray-Chemical Corp. He holds an agricultural degree from Delaware University.

The new building, now under construction, will be 50 x 200 feet, and will house facilities for blending agricultural pesticides for a wide area in the South.

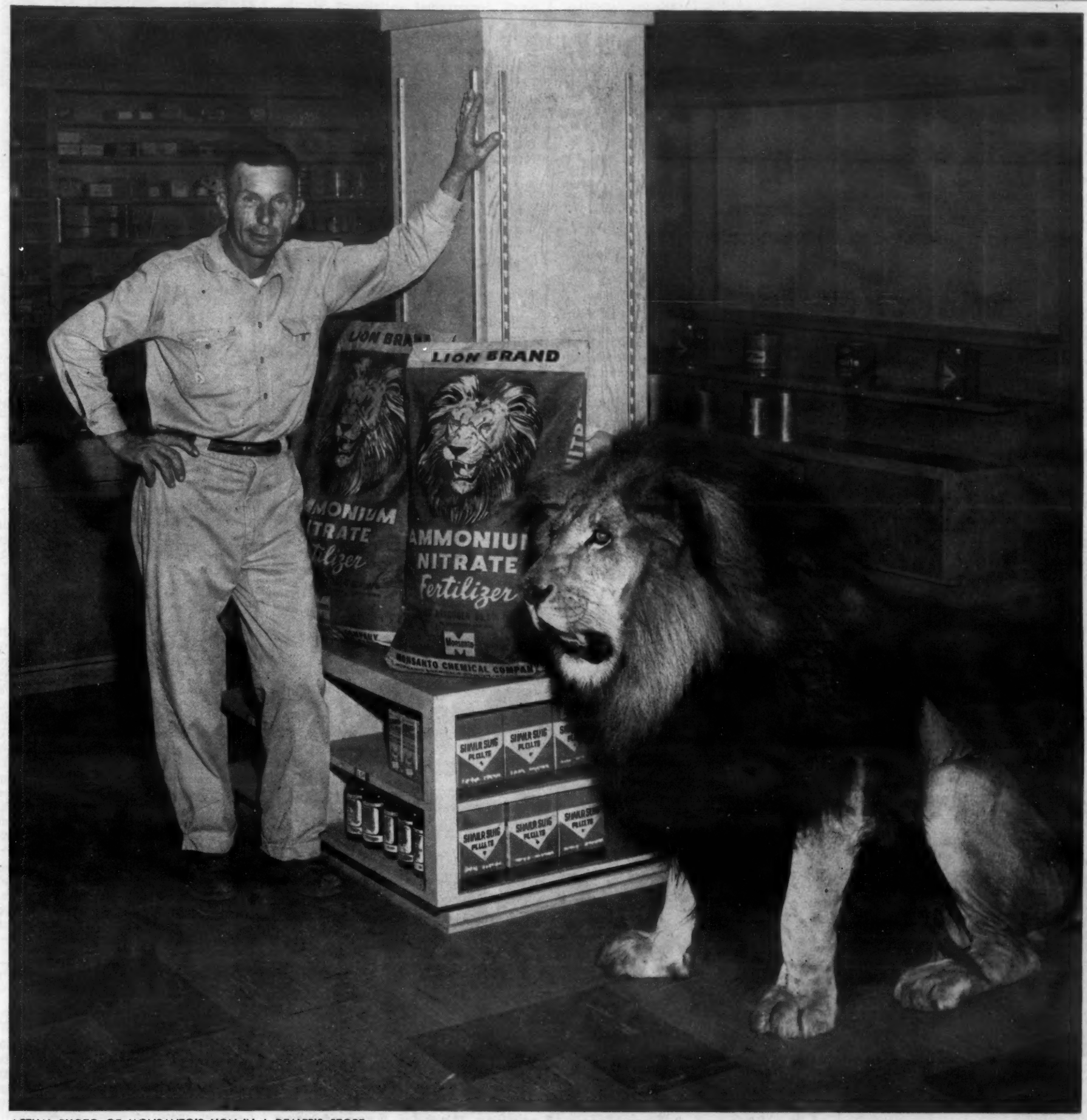
The parent company, founded in 1908, observes its 50th anniversary this year. When the firm began business, only a relatively few economic poisons were known. The company has kept pace with developments in the meantime, however, and has expanded from the original two-man mixing plant to its present modern plant and service program.

The first thirty years of the company's operations were spent in a small office and factory building, but in 1948 the company moved to more spacious quarters which now house the factory, storage warehouse and general offices.

Bayard E. Swayne
To head new operation



NEW PESTICIDE BLENDING PLANT—Planters Chemical Corporation expects to have in operation next April, a new 50 x 200 ft. plant and warehouse at Fayetteville, N.C. The architect's drawing, above, presents an over-all idea of how the new facilities will appear when completed. The company's headquarters are in Norfolk, Va.



ACTUAL PHOTO OF MONSANTO'S LION IN A DEALER'S STORE

To make more money – put LION in your store

LION BRAND AMMONIUM NITRATE advertising and field promotion help you sell more by getting across to your customers these facts:

- Lion brand is *guaranteed* to contain 33.5% nitrogen.
- Lion brand contains both of two important kinds of nitrogen: quick-acting nitrate nitrogen that gets plants started fast . . . and *long-lasting* ammonia nitrogen that resists leaching, feeds crops steadily for months.
- Lion brand is prilled . . . coated pellets of uniform size for easier spreading.
- Lion brand is *guaranteed* to flow freely not for just a year, but *until used*, when stored properly.
- Lion brand is now in a new green and yellow bag constructed to give greater protection.

MONSANTO'S PROMOTION AND ADVERTISING increase your sales and profits with:

- Advertising campaigns promoting mixed fertilizer as well as Lion brand in leading farm publications read by your customers.
- Local farm radio, billboards and local newspaper advertising support.
- Literature on crops grown in your area, including mixed fertilizer recommendations.
- Fertilization wall charts for your area.
- Soil test sample bags, memo books, decals, book matches, product samples, banners, folders and many other promotional items.

This year LION brand is better than ever . . . more uniform in size . . . can't cake when bags are stored properly.

* * *

Monsanto

World's largest producer of prilled Ammonium Nitrate

MONSANTO CHEMICAL COMPANY • INORGANIC CHEMICALS DIVISION • ST. LOUIS 24, MISSOURI

ATTITUDES

(Continued from page 1)

"really good farmer"? That he rates using more fertilizer per acre above all other qualities in a selected list of practices, is shown in the following table:

Selected Practices	Relative Ranking
He uses more fertilizer per acre.	1
He uses better crop rotation methods.	2
He has more fertile land to begin with.	3
He pays more attention to soil erosion problems.	4
He has more machinery.	5
He works harder and longer.	6
He cultivates more land.	7
He uses better quality seed.	8
He gets a higher yield per acre.	9

"This would seem to show that fertilizer enjoys considerable prestige with its users," the Institute observes. However, answers to this question may have been influenced by the fact that farmers knew that the interviewers were particularly interested in fertilizer. Moreover, the results probably would have been somewhat different if replies had not been restricted to the selected list of practices. It also should be noted that responses to this question vary significantly both regionally and by level of use.

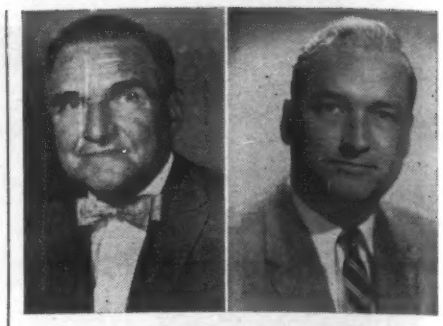
This listing of practices presents in broad outline a farmer's ideal of a "really good farmer." Advertising, promotion and sales programs which recognize and take advantage of a farmer's concept of what is good or ideal are more likely to succeed than those which ignore these beliefs. The high rating given fertilizer indicates an exceedingly favorable climate for promoting fertilizer.

What is the farmer's attitude toward commercial fertilizer? He is more likely to think of fertilizer in terms of increasing crop yields than as a means of cutting unit production costs and increasing profits.

The farmer also tends to think of an investment in commercial fertilizer as a financial risk with uncertain benefits. Fear of adverse effects influences level of use more often than does the promise of economic reward. About half of all farmers mentioned bad effects when a rate of use approaching experiment station recommendations was suggested. Only about one fourth mentioned good effects.

The non-users would prefer animal manure if unlimited amounts were available, as compared to a majority of high-level users who prefer commercial fertilizers.

The non-user would use only slightly more fertilizer than he is now using if he had "plenty of cash available and wanted to get the best investment for his time and money."



Frederick Marsic Henry DeArmond

Two Promoted by American Potash

LOS ANGELES—Frederick Marsic has been elected secretary of American Potash & Chemical Corp. and Henry DeArmond assistant secretary, according to an announcement by Peter Colefax, president. The officers were named following the election of Richard J. Hefler, formerly company secretary and assistant to the president, as vice president in charge of finance.

Mr. Marsic, formerly assistant secretary, retains his other positions as assistant treasurer and office manager at company headquarters at Los Angeles. Mr. DeArmond was administrative assistant prior to his present appointment. Mr. Marsic is the longest service employee of American Potash, having been with the company nearly 45 years.

Corn Show Winners

CANBY, ORE.—The second highest Oregon corn yield in history of the annual Canby state corn show brought the No. 1 award to Jerry Cooper of Stanfield with a hybrid yield of 195.7 bu. per acre. Other state winners were Sunrise ranch, with 195.2 bu. and Jim Kendal in third place with 193.4 bu., both of Stanfield. They also were winners of the eastern Oregon division. Western Oregon winners were Armin Netter, 155½ bu., and Henry Colvin, 153. Both are of Aurora. Of the 114 entries, 21 had yields of 150 bu. or over and 11 reached 100 bu. for western Oregon non-irrigated lands. Dr. R. E. Fore, Oregon State College agronomist and show chairman, said a noticeable trend was shown in heavier planting rates, mostly 19,000 plants per acre.

ENTOMOLOGISTS

(Continued from page 1)

tary-treasurer; and R. W. White, San Antonio, member of the executive board. Charles M. Meadows, Southwest Sprayer & Chemical Co., Waco, was made a member of the governing board.

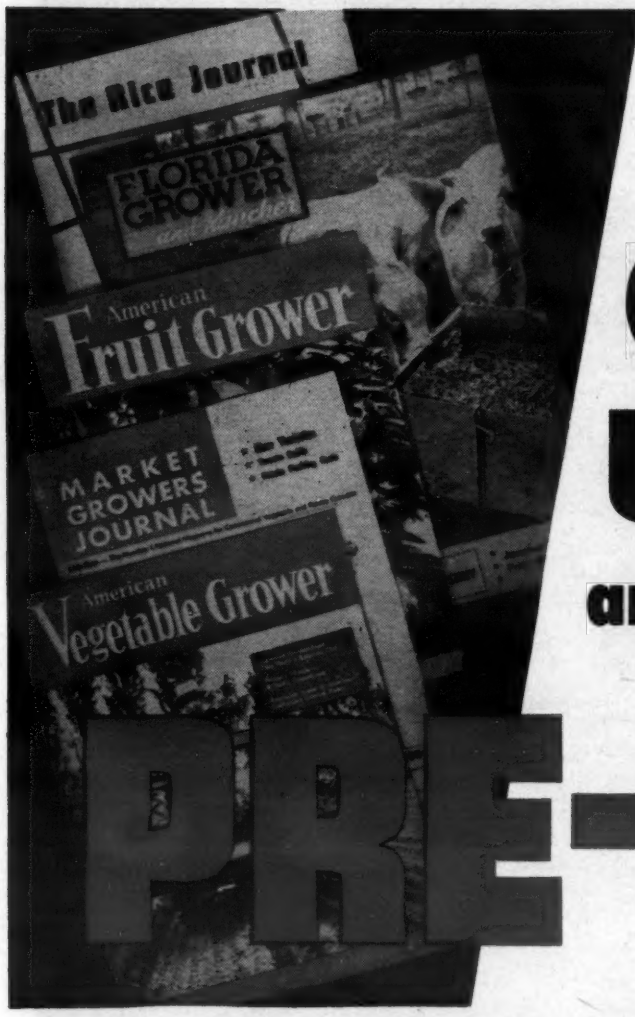
R. L. Metcalf, University of California, president of the Entomological Society of America, addressed the group briefly on the opening day, as did R. H. Nelson, Washington, D.C., secretary of the parent organization.

Submitted papers included reports on field tests made during the past season, technical papers on pesticide carriers, and on toxicology of different compounds. Emphasis was laid on control of cotton insect pests, and on control of livestock parasites.

Program committeemen included L. W. Noble, USDA, Brownsville, Texas; Kenneth T. Givens, Hercules Powder Co., Brownsville, Texas; and James A. Deer, Texas Agricultural Extension Service, Weslaco, Texas. Local arrangements were in charge of M. F. Wilkerson, Diamond Alkali Co., Houston; and W. Kenneth Conwell, Monsanto Chemical Co., Houston.

NORTH CAROLINA TONNAGE

RALEIGH, N.C.—North Carolina fertilizer shipments during the last half of 1957 totaled 199,446 tons, compare with 216,234 tons in a comparable 1956 period, according to the North Carolina Department of Agriculture.



Grace Urea Prills are PRE-SOLD

Specify Grace because:

√ Consistent Advertising Assures Ready Acceptance
√ Plant Location Assures Speedy Service

When you sell Grace Urea Prills, you sell a *preferred* product. That's because it is a Grace policy to use consistent advertising. This advertising is directed at the volume users of urea. It keeps Grace Urea *pre-sold.*

Then, too, the ultra-modern Grace plant at Memphis is ideally located. The excellent transportation facilities assure you of prompt, speedy service.

When you order urea, specify *Grace.* Get the urea backed by "A World of Experience."

FOR FOLIAR APPLICATION, new Agricultural Grade GRACE CRYSTAL UREA Fertilizer Compound is ideal, because it has a *low biuret* content, (Less than 0.2%), yet is concentrated nitrogen (46%). Order by name . . . GRACE.

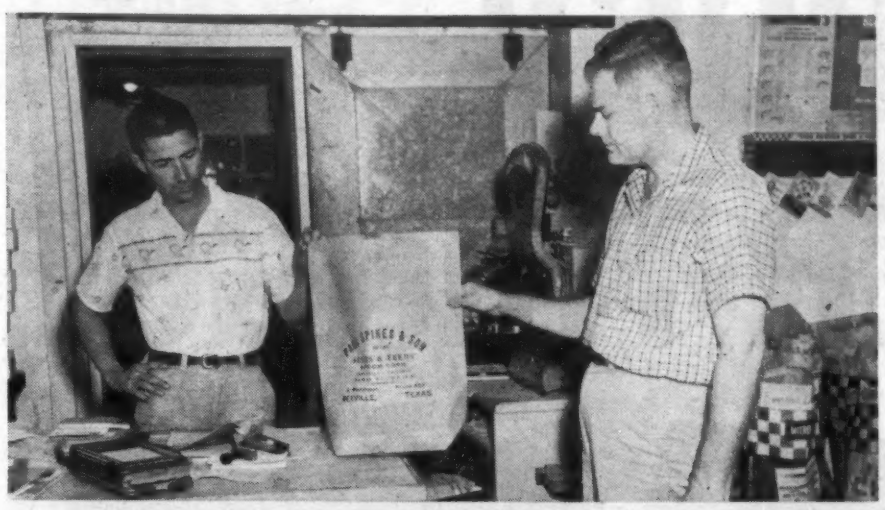
Grace Chemical Company
A DIVISION OF W. R. GRACE & CO.
MEMPHIS, TENN.

GRACE A WORLD OF EXPERIENCE

Special Merchandising Section

Better Selling

Marketing News and Features



SOIL SAMPLE BAG—A customer of Paul Spikes & Son, Beeville, Texas, is shown here delivering a soil sample to George Spikes whose firm will pay for having it analyzed. The Spikes management says that this service is a sure way to build the retail fertilizer business. The firm also furnishes the bag pictured without charge.

TEXAS DEALER SAYS

Soil Analysis Service Forms Basis for Fertilizer Sales

By RUEL McDANIEL
Croplife Special Writer

Consistent recommendations that farmers fertilize only after complete analysis of their soils and carrying on a program of local research into fertilizer problems have built a profitable fertilizer volume for Paul Spikes & Son, Beeville, Texas, managed by George Spikes, who is also mayor of the city.

The concern uses soil analysis as the basis of nearly all its fertilizer sales. "Because soils in this area vary so greatly," says Mr. Spikes, "we discourage any customer from buying fertilizer before he has had his soil analyzed thoroughly, to determine what it really needs."

That's the only way to build a constant fertilizer business, Mr. Spikes believes. Unless the customer does buy the proper fertilizer for his specific soil and fertilizer problem, he is not going to obtain maximum results; and unless he does receive proper benefits from his fertilizer investment, he is going to cease to be a customer.

To make it easy and inexpensive for customers to have their soils analyzed, the company handles all analyses for farmers without cost to them. All a customer is asked to do is to take proper and ample soil samples from his farm and bring them to the store. The firm also furnishes the paper sacks in which to bring the samples.

When the sample reaches the store, Mr. Spikes packs and identifies it properly, then sends it on for analysis. The results are sent back to the Spikes store.

With the analysis is a recommendation as to the fertilizers needed, and Mr. Spikes turns this over to the farmer. He does not even have to buy his fertilizer from the Spikes store if he doesn't wish to; but so far, nobody who has asked for an analysis has failed to buy his fertilizer at the Spikes place.

Mr. Spikes sells fertilizers mainly by contacting farmers right on their own farms, and invariably the preliminary to the actual discussion of the sale is the soil analysis.

"Farmers not only appreciate the free service," he says, "but they are subconsciously reassured by our insistence that they have their soils analyzed before buying fertilizer from anyone. The policy not only builds business but confidence for sales next year and the next."

In addition to sending in the soils of customers and prospects, Mr. Spikes also obtains numerous samples of the various types of soils in the trade area and has analysis made as a basis for further study of fertilizer problems in the territory.

He has been experimenting for sometime on various chemical combinations to overcome a widespread "yellowing" of crops, gardens and yards in the area. One experiment with fruit was particularly successful. It was a mixture of iron chelate with fertilizer, the exact ratio depending on the amount of infestation in the land. He came up with a formula that has stopped "yellow" in local soils. Going a step farther, he also found that yellowed plants, if not too far gone, could be restored with a spray of iron chelate.

Thus far, sale of the formula has been limited mainly to gardeners and yard owners, because the cost of the combination is too great to apply in quantity to a field; but he hopes to be able to build sufficient demand and volume to lower the cost to the average farmer within a year or two.

"These research projects help business indirectly as well as directly," Mr. Spikes points out. "When farmers know you're interested enough in their problems to spend time and money to find the answers, they appreciate your efforts and they just naturally give you some or all of their fertilizer business."

Oklahoma State Has New Agriculture Building

STILLWATER, OKLA. — First classes were held recently in the new five-story agricultural sciences building on the Oklahoma State University campus.

Horticulture, agronomy and forestry departmental offices also are in the building. Soils research and teaching continue in Whitehurst Hall till next fall, when laboratory fixtures will have been installed in the new building.

SHOP TALK

OVER THE COUNTER

By Emmet J. Hoffman
Croplife Marketing Editor

Taking a leaf from Uncle Sam's alphabetical dictionary, C. C. Jolly, owner of Waxahachie (Texas) Feeders Supply, has built a profitable small-order fertilizer business in an area not strongly sold on the use of commercial soil builders.

Until 1957, the section had been blasted by considerable drouth for four or five years, and many farmers weren't educated to see the value of commercial fertilizers on dry land that has scant hope of getting sufficient crop-growing moisture.

Mr. Jolly didn't agree with farmers on that point. To disprove the fallacy, he has consistently promoted the sound argument that crops without sufficient rain still will produce more if properly fertilized, and he knows exactly what fertilizers should be used locally, wet or dry.

"Fertilizer will produce a profit for any farmer who will recognize and follow the formula of the three 'W's'," he declares. "We preach them year in and year out. 'Where' to use fertilizer, 'When' to use it and 'What' to use are the basic factors in making fertilizer pay."

Mr. Jolly knows crops and cropping throughout his trade area, and he knows the elements to use on the various soils. When a farmer talks to him about fertilizer, he asks where the farm is (if he does not already know) and what crops he has grown the past three or four years. He asks the customer to bring in soil samples, which Mr. Jolly sends to Texas A&M College for analysis.

"One of the most obstinate elements we must fight," Mr. Jolly says, 'is handed-down ideas about fertilizers. Some farmers insist that their soils need heavy potash. We know that the only soil around here needing potash is the acreage that has carried alfalfa for four or five years. When we get a customer like that we try to talk him out of his deep-rooted theories; and if we can't, before we sell him we ask him to bring soil samples for analysis, so that we can show him that the formula he demands is not what his land needs.

"That is important to us, for a farmer who uses fertilizer and does not see satisfactory results not only ceases to be a customer but he discourages his neighbors from fertilizing."

Serves Double Purpose

GAINESVILLE, FLA.—Liquid nitrogen may serve as both fertilizer and weed killer in corn, according to Dr. E. G. Rodgers, agronomist with the Florida Agricultural Experiment Station.

The material is applied as a spray between the corn rows at lay-by time. It does an excellent job of burning weeds, as well as supplying needed nitrogen to the soil, Dr. Rodgers says. Three years of experimental work with liquid nitrogen in a field have been conducted by Dr. G. C. Klingman, agronomist with the North Carolina Agricultural Experiment Station.

C. C. JOLLY checks on an entry on the bulletin board which attracts many customers into his store, the Waxahachie (Texas) Feeders Supply.

RINGING THE CASH REGISTER

Double Duty

The back of envelopes can do double duty for farm store owners. Some dealers print on the backs of their envelopes the pictures of their store fronts, with the names prominently shown. One dealer has one of his billboards reproduced in full color on the back of his envelopes. Others use slogans, signs and brand names. Such pictures and printing can serve to give the store added publicity at little extra cost.

Created for the Dealer Who is TOO BUSY WITH OTHER THINGS...

CSC Hi-D AMMONIUM NITRATE PROGRAM FOR 1958

Know anybody busier than you? We don't!

Our whole advertising and sales promotion program is realistically based on the fact that you've got a lot of other things to sell besides nitrogen fertilizer. Mixed fertilizers, for instance. And a store full of other things, too.

We'll give it to you fast — item by item. See if you don't agree that it all adds up to *more sales* of Hi-D Ammonium Nitrate with *less work* on your part.

ADVERTISEMENTS
They say "see your dealer." Emphasize importance of mixed fertilizers. Running in key farm magazines. They reach out and pull in the farmers in your backyard. Tell the complete new Hi-D story.

POINT OF SALE
A wall sign that billboards Hi-D right in your store. A counter display that shows Hi-D in action plus a compact new Hi-D sample display. Window banner that tells 'em outside to come inside for new Hi-D.

LITERATURE
Folders that tell the whole Hi-D story for you. For hand out and mailing to your customers.

NITROGEN THE HEART OF THE HARVEST

It's Easy To See That It's Easier To Sell

Hi-D AMMONIUM NITRATE!

NEWSPAPER MATS
Eye-catching ads all done for you — ready to run in your local paper, alone or as part of a larger store ad.

SAMPLES AND TECHNICAL DATA
Sample bottles of Hi-D — a time-saving way for your customers to see for themselves. Technical data sheets that give you the facts fast to keep you up to date on Hi-D developments.

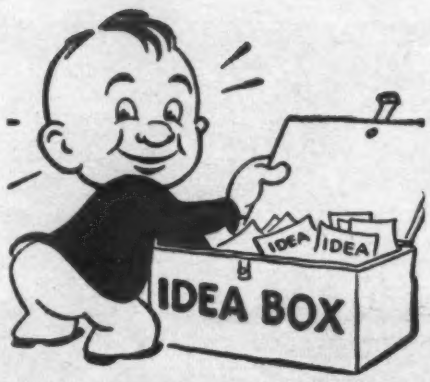
a product of

CSC

COMMERCIAL SOLVENTS CORPORATION

STERLINGTON, LA. • 344 WILLIAMS ST., N.W., ATLANTA, GA.

7890 FOLK AVE., ST. LOUIS, MO. • TERRE HAUTE, IND.



What's New...

In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

No. 6693—Liquid Fertilizer Clamps

Tiura Manufacturing & Sales has available a line of liquid fertilizer applicator clamps and shanks for distribution in the western slope area of the U.S. The products are intended for commercial applicators to buy, use and introduce to their customers. The clamps are available in several styles and sizes to fit standard or rounded shanks. They will fit 2-in. by 2¼-in. by 2½-in. square tool bars. The Tiura line includes the standard shank, the "Turk" shank and the "A-10" for specialized application. Secure details by checking No. 6693 on the coupon and mailing it to Croplife.

No. 6692—Silica Pesticide Carrier

A new spray-dried form of Zeolex 7A is now in production by the J. M. Huber Corp. Spray-dried pellets of the silica pesticide carrier yield higher absorptions and suspension values when airmilled or finely ground with toxicants such as DDT in the formulation of high concentrate wettable powders, it is claimed. The product packs tighter and saves more than 20% in storage space over the regular powder form, at no price increase, company officials claim. Check No. 6692 on the coupon and mail it to Croplife for further details.

No. 6691—Diazinon Residue Tolerances

Geigy Agricultural Chemicals, Division of Geigy Chemical Corporation, announces that Diazinon residue tolerances of 0.75 ppm have been established for tomatoes, cabbage, cauliflower and broccoli. Growers may now apply Diazinon sprays or dusts to control aphids, leafminers and vinegar flies (Drosophila) on tomatoes; aphids, diamondback moths and imported cabbage worms on cabbage, cauliflower and broccoli. Details may be secured by checking No. 6691 on the coupon and mailing it to Croplife.

Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

No. 6689—55-Gal. Steel Drum

Designed to save space and reduce handling and shipping costs, a new 55-gal. steel drum has been developed to interlock with adjacent containers when any number are unitized or packed closely together. Ray E. Frase (left), manager of the special products department for Signode Steel Strapping Co., and Vern I. McCarthy, Jr., vice president of Vulcan Containers, Inc., point out the design of the rolling hoops which are the key to the interlocking feature of the new "Uni-Drum" container. When unitized, a group of the new drums can be handled by a standard lift truck, it is claimed. Transit damage can be reduced because the drums contact each other at their six strongest points, the officials say. The "Uni-Drum" was developed by Signode Steel Strapping Co. in conjunction with Vulcan Containers which will manufacture and market the container. Secure details by checking No. 6689 on the coupon and mailing it to Croplife.

No. 6685—Gibberellin Bulletin

An 18-page technical bulletin which reviews research findings on the uses of the gibberellins is available from Merck & Co., Inc. The company, which produces the plant growth stimulant under the registered trademark "Gibrel," says the bulletin is especially helpful to those with a technical background. The bulletin contains an annotated bibliography of 188 pertinent scientific papers. Check No. 6685 on the coupon and mail it to Croplife to secure the bulletin.

No. 6690—Soil Fumigant

"Mylone" pre-planting test applications on turf are giving good control of weed seeds, soil diseases, insects, and nematodes, according to Union Carbide Chemicals Company, Division of Union Carbide Corporation. The soil fumigant is now being used before planting to control soil pests in ornamental, tobacco, and certain vegetable seed beds, states Union Carbide. The company manufactures the basic chemical and supplies it to formulating companies which produce their own trademarked products, based on "Mylone," for commercial sale. The formulated dry product is distributed with a fertilizer spreader over the surface of the turf bed and then irigated into the soil. No plastic cover is needed on the bed. "Mylone" must be applied ahead of seeding or sprigging in the spring and allowed time to dissipate so it will not affect the young grass, the company explains. The product can also be used in the fall before spring planting. Secure details by checking No. 6690 on the coupon and mailing it to Croplife.

No. 6683—Fertilizer Buying Survey

A brochure entitled, "Four State Fertilizer Buying Study," has been prepared by National Analysts, Inc., for Nitrogen Division, Allied Chemical & Dye Corp. Four hundred farmers were interviewed in Michigan, Indiana, Illinois and Ohio and the results are presented in the brochure. Farmers who answered the survey questions said that the use of fertilizer more than any other single factor has accounted for improved crops and crop production. The brochure also indicates that the dealer is the main source of information about form, analysis and amount of fertilizer to be used. Check No. 6683 on the coupon and mail it to secure the brochure.

No. 5923—Bulk Scale

The newest addition to the materials-handling line of the Burrows Equipment Co. is a 1,000-lb. model 1200 bulk scale. Company officials said the "heavy-duty scale features a built-in Fairbanks-Morse scale to weigh any lot of material down to the ounce, accurately and quickly, as it is handled." The unit is 38 in. high and 30 in. wide, and has a hopper 40 in. in length. All controls—two-wheel foot-brake, scale, dump handle and pushing handle—are located at the rear, within easy reach of the operator. Standard equipment includes 10 in. rubber wheels at the front and 6 in. roller bearing swivel casters at the rear. Details may be secured by checking No. 5923 on the coupon and mailing it to this publication.

No. 5952—Dust Filter

Industrial dust control utilizing the new Day type "RJ" dust filter is described in an 8-page bulletin G-579. The cutaway view of filter shows working parts and the filtering principle. The bulletin includes facts on new design, efficiency and operation of the unit. Dimensions, specifications and illustrations of five basic "RJ" units for a wide variety of dust control applications are shown. Check No. 5952 on the coupon and send it to this publication to receive the bulletin. Please print or type name and address.

No. 5959—Alfalfa Seed Treatment

Details of a new systemic insecticide made by the American Cyanamid Co. to combat the spotted alfalfa aphid during the early stages of growth in alfalfa fields have been announced. The product, called by the trade name, Thimet, was recently cleared by the U.S. Food and Drug

(Continued on page 14)

Send me information on the items marked:

- ☐ No. 5923—Bulk Scale
- ☐ No. 5929—Tank, Flatbed
- ☐ No. 5952—Dust Filter
- ☐ No. 5947—Bulk Storage
- ☐ No. 5959—Seed Treatment
- ☐ No. 6682—Liquid Fertilizer
- ☐ No. 6683—Fertilizer Survey
- ☐ No. 6684—Rock Phosphate
- ☐ No. 6685—Gibberellin Booklet
- ☐ No. 6686—Fertilizer Applicator
- ☐ No. 6687—pH Booklet
- ☐ No. 6688—Seed Stimulant
- ☐ No. 6689—55-Gallon Drum
- ☐ No. 6690—Soil Fumigant
- ☐ No. 6691—Tolerances
- ☐ No. 6692—Pesticide Carrier
- ☐ No. 6693—Fertilizer Clamps

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COMPANY .....

ADDRESS .....

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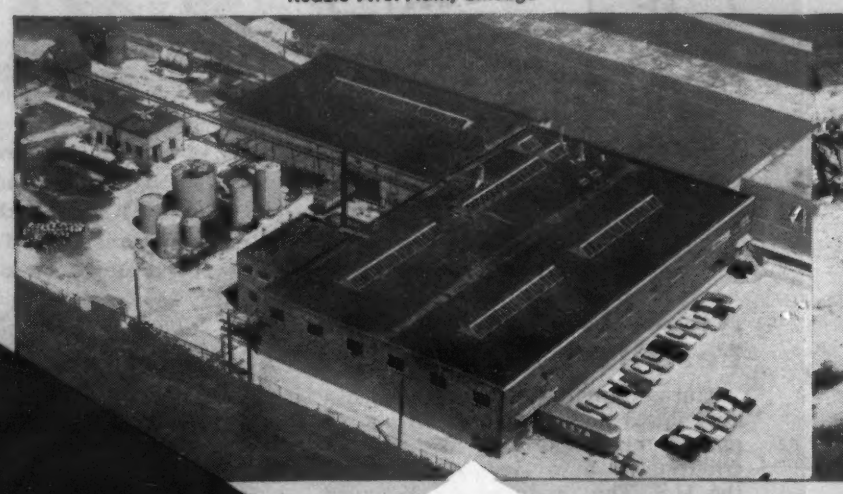

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TOXIMUL 102 AND 103. Used at concentration levels of only 2-4% this new emulsifier "team" gives flash emulsification and high stability for both chlorinated insecticides and herbicides. Less to inventory, too!

TOXIMUL P. Specially developed emulsifier for Parathion.

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TOXIMUL 250. Ideal for emulsifying Pentachlorophenol and CIPC.

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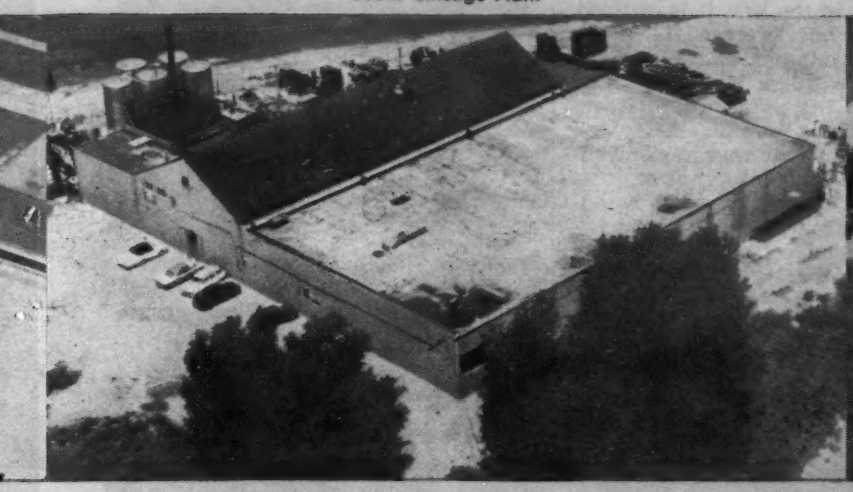

Millsdale Plant (near Joliet, Illinois)

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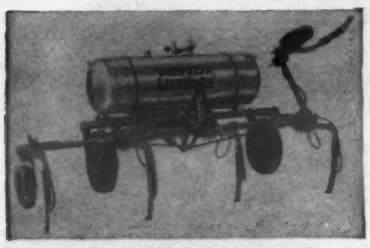
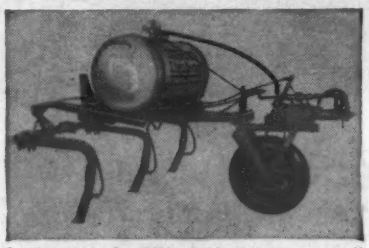
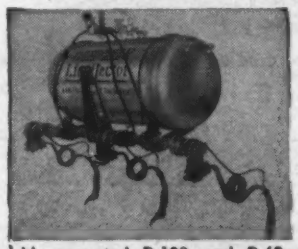


Dempster 3-point hitch hydraulic lift NH_3 LiquiJector, equipped with LiquiJector pump. Will permit use of variety of 3-point hitch tools in combination with application.



Semi-mounted NH_3 / LiquiJector, with Dempster LiquiJector pump or flow control valve—perfectly balanced, highly maneuverable, accurate and economical. Plow, plant, till as you fertilize.

Type S LiquiJectors. Equipped with Aluminum, Ni-Resist or Cast Iron metering pump for corrosive or non-corrosive liquid fertilizers and solutions.



Quickly mounted D-100 and D-60 anhydrous ammonia LiquiJectors, with flow control valve, for smaller acreage and low cost.

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FARM DEMPSTER EQUIPMENT

DEMPSTER MILL MFG. CO.
BEATRICE, NEBRASKA

WHAT'S NEW

(Continued from page 11)

Administration for treatment of alfalfa seed prior to planting, according to Cyanamid. Officials state that this treatment "will control the spotted alfalfa aphid on seedling alfalfa plants for a period up to six weeks after emergence." Later the product breaks down so that there is no residue problem in the hay, it is claimed. Seed which has been coated with "Thimet" germinates and allows the product to be taken by the seedling rootlets into the plant where it remains up to six weeks. After the product's potency disappears, conventional type insecticidal sprays or dusts are suggested. Seeders need to be adjusted when treated seed is used because of the added bulk. Company officials state that leafhoppers, mites and other sucking type pests of alfalfa are also controlled through seed treatment. Details may be secured by checking No. 5959 on the coupon and mailing it to this publication. Please print or type name and address.

No. 6684—Rock Phosphate Booklet

A periodical publication, "Bigger Acres," is made available by the Robin Jones Phosphate Co. to show the advantages of using finely ground rock phosphate in restoring depleted minerals in the soil. The publication details case studies to show how rock phosphate is used in increasing farm production at minimum cost. Well illustrated, the pamphlet is suitable for posting on a dealer's bulletin board. To receive the publication, check No. 6684 on the coupon and mail it to Croplife. Please print your name and address.

No. 6686—Plant Food Application

New literature on the "Multi-Spread Process" for distributing plant foods has been prepared by the process developer, A. A. Hurt, and the distributor of the equipment, Suamico Engineering Corp. The process permits the distribution of 25 lb. to 900 lb. per acre of total plant food (complete fertilizer), it is claimed. The three elements can be applied in a wide range of analyses. Each element

can be regulated individually. Four slow-speed fans take care of a 30-ft. spread. The equipment can be geared either through power take-off or from the truck's drive shaft. Distribution of the equipment will be through dealers whose inquiries are welcomed. Check No. 6686 on the coupon and mail it to Croplife.

No. 6682—Liquid Fertilizer Booklet

The Sohio Chemical Co. has prepared a detailed book dealing with liquid fertilizer manufacture. The book is entitled "Sohiogen Nitrogen Solutions." The company states, "As a service to our customers now operating liquid fertilizer manufacturing plants and those contemplating liquid fertilizer manufacture, we have attempted to consolidate information accumulated from various sources with our own recent research contributions." Contents include liquid fertilizer definition and history, how liquid fertilizers are made, chemical and physical properties, how to formulate liquid fertilizers (calculations), handling nitrogen solutions, safety and "Sohiogen" products.

Secure the booklet without charge by checking No. 6682 on the coupon and mailing it to Croplife. Please print name and address.

No. 6687—Soil pH Booklet

Bulletin 731—"What Every Plant Grower Should Know About Soil pH" has been prepared by Beckman/Scientific Instruments Division. The booklet contains charts, graphs, and illustrations—designed to help both the professional and amateur grower in achieving better lawns, bigger crop yields and more for his fertilizer dollar. The 16-page booklet, written by the well-known agricultural consultant, Dr. Robert E. Atkinson, may be obtained free of charge by checking No. 6687 on the coupon and mailing it to Croplife.

No. 6688—Seed Stimulant

Merck & Co., Inc., has available a "technical service use direction sheet" describing "Gibrel Seed Stimulant 88." The material is intended primarily for seed producers and processors, and it discusses characteristics of the seed stimulant, directions for use, methods of treating seeds, resulting germination of treated seeds, and early growth of seedlings. It also lists seeds which respond to "Gibrel Seed Stimulant 88." Secure the sheet by checking No. 6688 on the coupon and mailing it to Croplife.

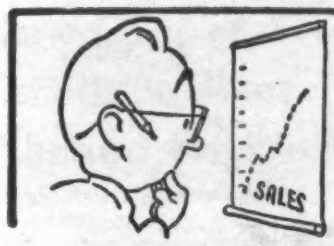
No. 5947—Bulk Materials Storing

The latest information concerning Day equipment for storing and handling bulk materials is contained in a bulletin prepared by the Day Co. Descriptions, specifications and dimensions of the company's vertical tanks and horizontal tanks are included. Pneumatic conveying systems, bulk material handling accessories and custom fabricating are also discussed. The bulletin contains photographs of typical bulk material tank installations.

Virus Disease of Wheat Called Serious

STILLWATER, OKLA.—An Oklahoma State University researcher has estimated that a severe infestation of soil borne mosaic in a wheat field can cause a 50% damage to the crop. The virus disease is often mistaken for a nitrogen deficiency since it leaves the field with a mottled yellow appearance.

Dr. Harry Young, Oklahoma State University plant pathologist, recommends any one of three varieties (Concho, Comanche or Westar) in areas most susceptible to outbreaks. Oklahoma's most serious outbreaks have been during the spring of 1952, 1954 and 1957 in river bottoms in the northeastern part of the state. Black clay soils are found in this northern tier of counties and other states are thought to be associated with the mosaic problem.



Doing Business With

Oscar & Pat

By AL P. NELSON
Croplife Special Writer

Pat McGillicuddy sat at his desk laboriously writing copy in long hand for the mimeographed Farm Service Bulletin which the firm of Schoenfeld & McGillicuddy issued periodically over the violent, economic objections of Oscar Schoenfeld.

Rotund, his few remaining hairs combed carefully, Oscar sat at his desk, figuring discounts, and he was irritated. He was irritated because he always got irritated when he saw Pat working on the mimeographed bulletin. Oscar was not exactly sold on the merits of any advertising. "They know we got it. Let them come and get it" was his motto.

"Ach, why are you wasting time on the paper?" Oscar snapped finally. "It is almost spring. Farmers haf to buy fertilizer. We can get the orders without advertising."

Pat laid his pencil on the desk and looked at his frowning partner. "No, sir, you have to keep advertising to let folks know you are in business. Statistics show that there's a 20% turnover in most farm populations every year due to deaths, retirements, etc. That means many new customers come in every year."

"Yah, people that don't pay bills," Oscar said. "They get chased out of other places."

"Oh, no," Pat said. "I've checked on some of the new customers we got last year. They pay their bills as promptly as many of the older customers."

"Yah, after we wrote them two or three letters," Oscar put in sharply.

"This bulletin is necessary right now," Pat went on. "Some farmers are on the fence about fertilizer, most have their soil sample tests back from the state laboratory, and they are wondering if they should buy as much fertilizer as the soil laboratory advises, or chisel. Our bulletins will show them it pays to fertilize to full recommendations."

"They should not spendt more than they haf," Oscar said. "I don't blame them for that."

"Well, you can spend money and not get anything for it," Pat said, "and when you can invest money—in fertilizer—that's the term I'm using. I don't advocate customers spending money for fertilizer. I tell them to invest in fertilizer and get good returns."

"No matter what you say, ach, they still must pay for it," Oscar snapped practically.

"Then take this matter of DDT," Pat said. "So many people, including those that like organic fertilizer and supplies, are knocking DDT in pesticides. We've got to counteract those rumors with facts."

Now Oscar really was surprised. "Ach, keep our nose out of that. The less we say about it the better. Let the high mucky muck fellows fight that out, not us."

Pat slowly shook his head. "No, every fertilizer dealer in the country has got to fight for the industry that helps him make a living."

"B—but," sputtered Oscar, "you put in that line of organic supplies and I bucked you. Now you want to tell those organics that DDT is all right. Vas ist?"

"DDT is all right, when it's used properly," Pat said patiently. "And I want to impress that fact on the farmers. And the U.S. government has said so, too. In fact the Federal Insecticide, Fungicide and Rodenticide Act of 1947 and the Miller amendment to the Food, Drug and Cosmetic Act, July 22, 1954 says the insecticides it approves are all right when those who use them closely follow all instructions as to their use."

"Ach, let's not get into that fight," Oscar said. "If the organics come in here and complain about DDT or anything else, tell them to go buy elsewhere."

"No," said Pat, "we've got to uphold what we believe is right, and this bulletin can spread our story to the farmers. Take electricity on the farm, for example. It helps the farmer, but if he doesn't use it right, it can kill him and his family and stock and burn up buildings. He has to use it according to instructions—right?"

"Ach, those farmers got too many lights on nowadays," Oscar retorted. "When you drive by the house, the yard, the barn and everyplace is lighted up. Think of the bills. Why don't they use a couple of lanterns, like farmers used to?"

"Because this is 1958 and not 1917, Oscar, and the world has changed."

Oscar snorted. "Saving money hasn't changed. It's chust as hardt today as it was years ago, but it's got to be done."

"Granted," Pat admitted, "but to get the money at a profit so some can be saved, a fertilizer dealer has to deal with unfair propaganda. I'm putting some good stuff about DDT into this bulletin. For instance, in a speech to the House of Representatives July 12, 1957 the Honorable A. L. Miller commented on the approval of recent pesticide regulation by Dr. Bernard E. Conley, secretary of the Committee on Pesticides of the American Medical Association. Dr. Conley said, 'Pesticides play an important role in providing the nation's food supply and protecting the public health. Thanks to the Miller amendment to the Federal Food, Drug and Cosmetic Act, the consumer is assured of an unparalleled degree of protection'."

"He uses words that are too big," Oscar complained. "Maybe he gets paid for talking big words."

"Oh, no, that language is legal and defines things the way they are," Pat said. "The Miller amendment requires the pre-testing of a pesticide chemical for the protection of the consumer. That's what we have to tell customers about now, and also when we sell them pesticides. Maybe we can even have a sign or two in our departments of the store containing this information—in big letters."

"Ach, signs cost money," Oscar complained, "and people won't read them."

"People who are interested will read them," Pat said. "Listen to this: A Dr. Biskind made some charges about DDT saying that it contributed to infantile paralysis, heart disease, cancer, x-disease of cattle, hoof and mouth disease, Newcastle disease and other diseases, but none of Dr. Biskind's charges have been substantiated by serious scientific research by the U.S. Public Health Service."

"Ach, why do they let a man like that talk so much?" Oscar protested.

"It's a free country," Pat said. "A man has to stand on what he says. And before people believe him, they should make him prove what he says.

"And listen to this. Dr. Leonard Scheele was surgeon general of the U.S. Public Health Service for many years before his recent retirement, and in a letter to former congressman Glenn Davis, Waukesha, Wis. Dr. Scheele wrote: 'This article by Dr. Biskind recapitulates charges against DDT made by the author as long ago as 1949. These have been carefully considered by our toxicological experts. In spite of continuous laboratory research on DDT in animals, and clinical studies of cases of alleged poisoning, our toxicologists have been, thus far, unable to substantiate Dr. Biskind's allegations.'

" 'Some of the diseases claimed by him to have increased in prevalence since the advent of DDT have, in fact, shown no increase. Others are now reported more frequently because of the changing distribution of age groups in our population—or because of procedural changes in morbidity reporting. Certain of the diseases in Dr. Biskind's list were well known long before DDT was introduced to this country and occur in places where DDT has never been used'."

"Ach," cried Oscar. "You expect me to tell all that to every customer who asks about it?"

Pat shook his head. "No, I don't, Oscar. But both of us will have to tell the customers who ask, this story in our own words. And I am reporting these findings, and authority sources in our bulletin for every farmer customer to read if he wants to."

Oscar waved his hand deprecatingly. "Ach, you go ahead and tell them, just so long as you don't spendt too much money. I will stick to the discounts."

NORTH DAKOTA CIRCULAR

FARGO, N.D. — Information on chemical weed control in field crops has been brought up to date in a publication now being distributed by North Dakota Agricultural College Extension Service. The 6-page circular outlines recommendations prepared from the results of research by the north central states and the North Dakota Agricultural Experiment Station. Use of the weed killing chemicals on wheat, durum and barley, oats, winter rye, flax, corn, soybeans, sugar beets, grass seedings and forage legumes is described. Specific chemicals to use, application rates and suggested application times are explained.

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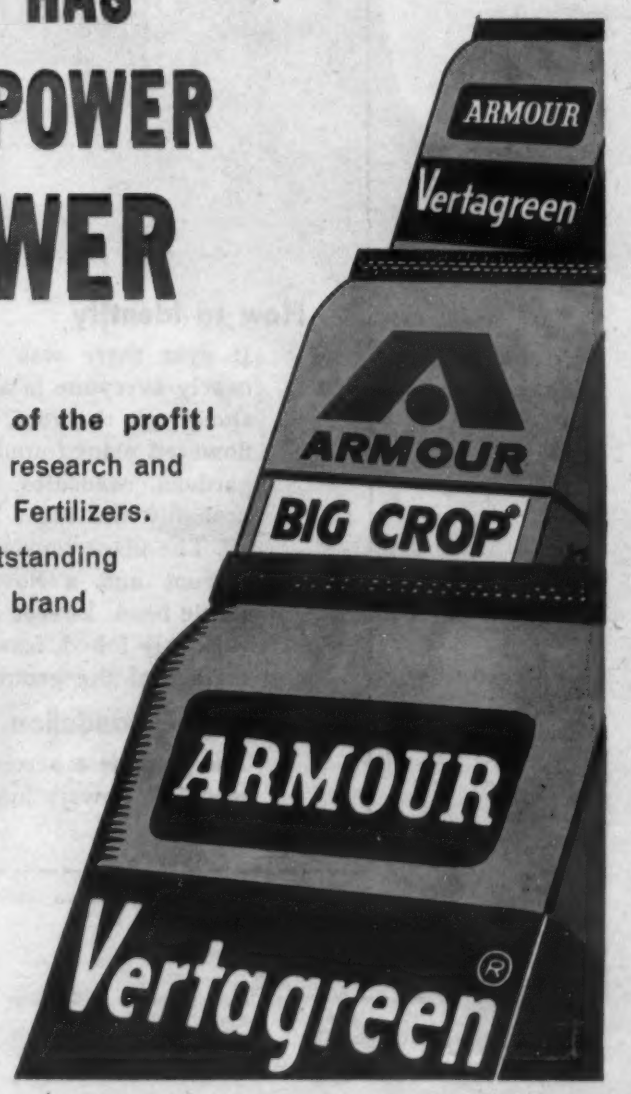
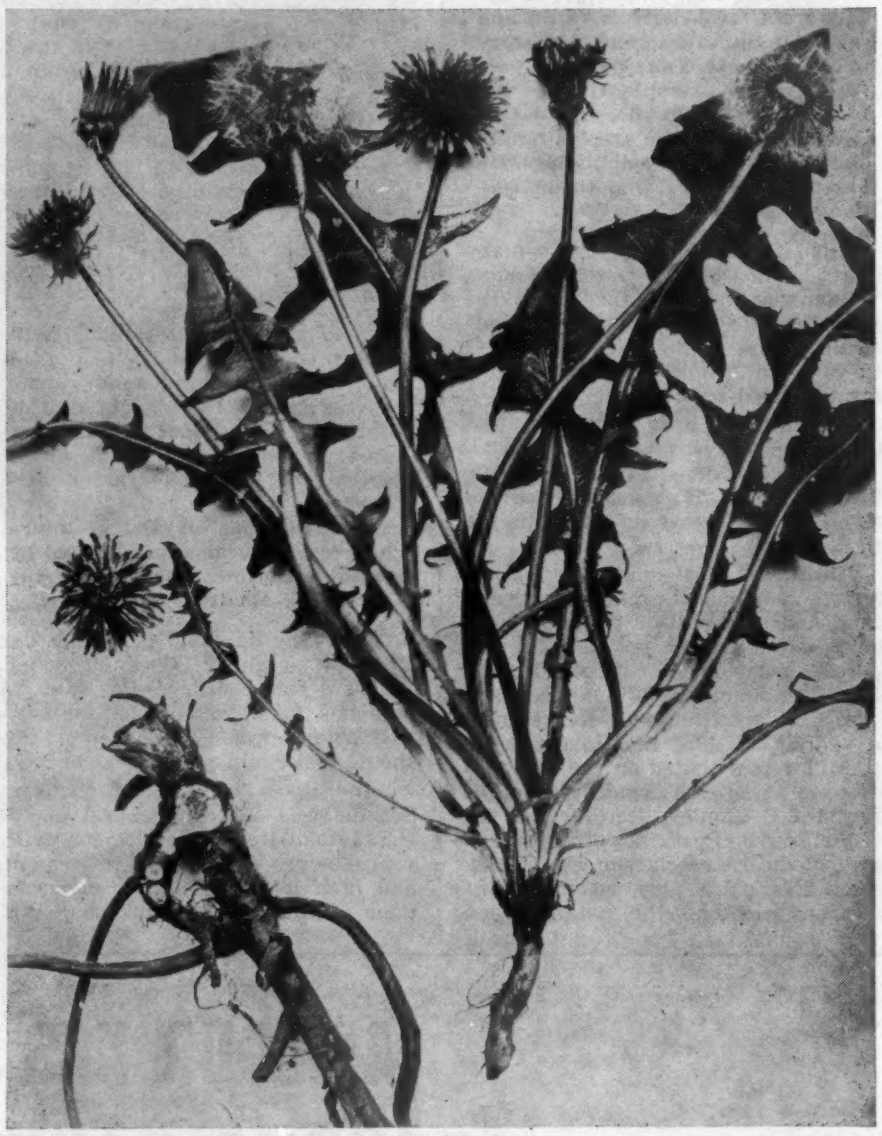


WEED OF THE WEEK

Mr. Dealer—Cut out this page for your bulletin board



Dandelion

(Taraxacum officinale)

How to Identify

If ever there was a weed with which nearly everyone is acquainted, dandelion should get the vote. The familiar yellow-flowered plant found in lawns, meadows, gardens, roadsides, and waste places is probably the most hated lawn weed of all. The plant consists of a rosette from a taproot and a flower stalk bearing a single head. Leaves are alternate, simple, variously lobed, forming a rosette at the surface of the ground.

Habits of Dandelion

The plant is a perennial, reproducing by seeds. It flowers and seeds March-June, and September to December, in some portions of the country, in all months. Dandelion was introduced in the U.S. about 1870 and is now well distributed throughout the states, although with less frequency in the southwest.

Control of Dandelion

This pest is susceptible to a number of herbicidal chemicals which are successful in controlling it. Cultural means of control include application of fertilizer to the lawn to invigorate the grass which will tend to crowd out the weeds. The plant food should be applied in April and again in September.

Illustration of Dandelion through courtesy of U.S. Department of Agriculture.

New Cooperative Fertilizer Plant Planned for Fresno

SAN FRANCISCO—The California Farm Supply Co., a Farm Bureau affiliate, has joined with grower cooperatives in the San Joaquin Valley and others in forming a new cooperative to build a basic fertilizer manufacturing plant, according to L. A. Rozzoni, president of the supply company.

The new company, a farmer owned and controlled cooperative organized under the agricultural laws of California, is named Valley Nitrogen Producers, Inc., and is located in Fresno, Cal. A plant, soon to be constructed there, will produce anhydrous ammonia, aqua ammonia and ammonium sulphate. Its rated capacity will be 150 tons of anhydrous ammonia per day.

Included in this joint venture are a number of cooperative cotton gins, including the Stratford Cooperative Gin, as well as west side San Joaquin Valley growers.

This plant is to be a duplicate of one being built by the Mississippi Chemical Co. in Mississippi. Mississippi will provide technical and engineering assistance during the construction of the Fresno plant, and for a period of years thereafter, according to Mr. Rozzoni.

Included as early members of Valley Nitrogen Producers, Inc., and as members of the board of directors, are the following ranchers and Farm Bureau members: Sherman Thomas, Roland Hill, Lester Heringer, Sam Hamburg, Mel Carberry, Jack Harris, Victor Sandell, Mervyn Voth and H. S. Stanley.

5-10-10 Leads Sales Of Fertilizer Grades In North Carolina

RALEIGH, N.C. — North Carolina farmers purchased more than 30 grades of fertilizer during the last fiscal year. Among them 5-10-10 led in sales with 285,378 tons. Next in order were 3-9-9 and 2-12-12 with respective tonnages of 250,550 and 139,157.

Sales of 5-10-10 represent 40% of the state's total of 1,141,442 tons. It led in sales chiefly because it has a nitrogen-phosphate-potash ratio of 1-2-2 which is recommended frequently for corn, cotton, small grain, sorghum and various vegetable crops.

The follow-up grade—3-9-9—is a big tobacco fertilizer. It has also been manufactured for other field crops, but its manufacture will now be limited for tobacco since farmers can get nitrogen, phosphate and potash in the same ratio with 4-12-12 goods.

Fertilization of alfalfa, pastures, and corn under certain conditions accounts for most of the 2-12-12 sales. Of these three top grades 2-12-12 has the highest plant nutrient content—a total of 26%, whereas 3-9-9 has the lowest—21%. The weighted average nutrient percentage of all fertilizers sold in North Carolina last year was 23.7. This value shows a marked increase over the figure of 22.2% for the previous fiscal year.

Glyodin Accepted as Spreader-Sticker Agent

NEW YORK—A statement that "Glyodin can be used as a spreader-sticker" has been accepted by the U.S. Department of Agriculture for addition to the fruit fungicide's commercial label, according to Union Carbide Chemicals Co., division of Union Carbide Corp. It is pointed out that the double benefit of both fungicidal and spreader-sticker action will bring new operating economy to many apple, red cherry, and peach growers.

Glyodin is said to control fruit diseases such as apple scab, sooty blotch, Brooks spot, peach brown rot, and cherry leaf spot. In addition, it causes spray to spread and stick much more evenly and thoroughly over fruit tree foliage. This helps other chemicals in the mixture work better, the makers state. Glyodin is recommended in Virginia for addition to the zinc-lime spray used to control peach bacteriosis, and in Massachusetts, for inclusion with dichlone and ferbam for peach canker control.

SEED FIRM MANAGER DIES

WALLA WALLA, WASH. — Miss Derotha Starrett, W. G. Starrett Co. manager, here, since 1936, died recently. The seed company was founded by Miss Starrett's grandfather in 1870. Later her father, W. F. Starrett, managed the business until his death in 1936. Miss Starrett then assumed charge of operations.

Coronet Phosphate Co., accepts for the second consecutive year the Ralph B. Douglass trophy awarded annually to the Smith-Douglass division with the best safety record. Twelve divisions compete for the traveling award. Making the presentation is H. H. Van Bockel, safety and personnel director at Coronet's Plant City, Florida, production facilities. The Coronet plant completed 1957 without a lost time accident. Since the last lost time accident at Coronet in December, 1956, 443,524 man hours have been worked without a disabling injury.

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NPFI SURVEY RESULTS

(Continued from page 1)

action. "It should be noted that the results of personal experimentation may lead a farmer to use less as well as more fertilizer," the Institute notes.

This is particularly true if such personal tests are not properly planned, carried through and evaluated. Farmers need guidance in performing such tests so that the results will be reliable.

Practical farm demonstrations and personal experimentation seem to be more important in influencing low-level users and non-users who more often rely on the neighbor-influence and trial and error methods.

Farmers need help in judging results from using fertilizer so that they can view fertilizer as a known factor in production. Otherwise they tend to attribute the benefits from fertilizer to other factors. Demonstrations and experimentation permit farmers to see the results of fertilizer practices under circumstances that are easily related to their own farming operations.

Why then don't farmers use more fertilizer? Non-users most often gave "not enough money" as the reason for not using fertilizer. "This probably means that they use available money to buy products they consider more likely than fertilizer to bring dollar returns or give personal or family satisfaction," it is observed.

Here is a tabulation of reasons given by farmers as to why they don't use fertilizer:

Reason	Percent*
Not enough money	33
Not necessary	29
Unfavorable weather conditions	27
Prefer organic fertilizer	18
Substitute another farming practice	6
Don't approve of using commercial fertilizer	5
Don't have necessary equipment	4
Don't know how to use it	3
Other	13

*Percent of total mentioning each reason. (Some farmers gave more than one reason.)

Unfavorable weather conditions were given almost as often as lack of money as a reason for not using fertilizer. Farmers apparently believe that unfavorable weather is likely to have a much greater effect on results from fertilizer use than research results would indicate. (Research indicates that fertilizer frequently can be used to help overcome unfavorable moisture conditions and increase the efficiency of water utilization.)

Less than half of non-users gave reasons which display a personal bias against commercial fertilizer. Of those biased against fertilizer, most either thought fertilizer was not necessary, or preferred organic fertilizer.

★ ★ ★

Survey Indicates Grades and Ratios Mystify Farmers

WASHINGTON — Fertilizer terminology is a mystery to the average farmer, according to the National Plant Food Institute survey results just issued. Although some 80% of all farmers said they know the plant food elements needed by their soils, some 60% gave either wrong or partially wrong answers when asked to choose grades which would correct specified plant food deficiencies.

The table below shows farmers' answers to a question which asked them to choose among four grades of fertilizer to cure (a) a nitrogen deficiency, and (b) a K_2O deficiency:

	All farmers %	High users %	Non-users %
Both answers right	41	58	22
Both answers wrong	44	23	67
One right, one wrong	16	18	11

Therefore, the average farmer doesn't seem to understand clearly the meaning of analysis, grade or ratio. About 30% of all farmers apparently change their fertilizer practices from year to year indicating uncertainty, dissatisfaction, or a definite effort to improve.

By reason of farmers' limited knowledge and lack of understanding about fertilizer, many communications about analysis and amount are incomplete and are not fully effective in influencing farmers' thoughts and behaviors. "Many messages are sent, but only a few are received," it is observed.

The farmer seeks information and advice from others to overcome his uncertainty and lack of knowledge, the survey indicated. He rates county agents and agricultural college publications very high as sources of practical fertilizer information, as seen in the following table:

Source of Information	Ratings*
County agent	72
Agricultural college publications	38
Farm magazines	30
Local dealers	26
Neighbors	20
Manufacturers' salesmen	5
Radio and television	4
Newspapers	2
Others	4

*Percent of highest possible rating.

However, he more often discusses his fertilizer needs with others such as his local dealer or neighbors before buying. (Nearly 60% of all farmers reported one or more such discussions.)

Person Talked With	Frequency (Percent)
Local Dealers	32
County Agent	18
Neighbor	15
Family Member	14
Soil Conservation Man	9
Manufacturer's Salesman	3
Vo-Ag Teacher	2
College Specialist	1
Banker	1
Other	5

The farmer does a lot of reading about fertilizer. (About two-thirds of fertilizer users reported reading something about fertilizer.) He also hears about fertilizer on radio and television. (About 30% of fertilizer users recalled hearing something about fertilizer on radio or TV.)

Farmers apparently have confidence in their state agricultural colleges as sources of practical information. This indicates that any promotional program for fertilizer should at least be endorsed by state colleges and preferably should be carried out in cooperation with them. Fertilizer information must be considered authentic if it is to be accepted.

Personal discussions were considered helpful and frequently led to specific action, it was indicated. Some 82% of those reporting one or more discussions before buying fertilizer, said the discussions were helpful; 70% said they led to specific action. While a higher percentage of farmers seem to read about fertilizer than discuss it with others, discussions seem to lead to a much higher degree of action.

Subjects discussed when a farmer talks over his fertilizer needs were described as including mostly analysis, amount and price. Analysis and amount apparently are of more interest than price, as seen in the following table:

Subjects discussed	Rating* (Percent)
Analysis	55
Amount	40
Price	36
Expected results; advantages	16
Brand	10
When and how to apply	8
Other	15

*Percent of total mentioning each subject. (Some mentioned two or more subjects.)

Advantages of using fertilizer and expected results rate low as subjects for discussion.

Established agricultural publications are principal reading sources. Farm magazines — especially farm magazines concerned with local and regional interests—were mentioned most frequently by those who said they had read about fertilizer.

Government and agricultural extension publications rate next in order as reading sources, but literature published by fertilizer manufacturers rates very low.

Of users who reported reading about fertilizer, over one-half said the information they read was helpful, but less than one-fourth said it led to further action. Of users who reported hearing about fertilizer on radio and TV, about one-third said the information was helpful, but only 12% said it led to further action.

While reading and hearing about fertilizer seem to lead to further action much less frequently than do personal discussions, these sources may have more influence on a farmer's initial thinking about fertilizer than do discussions.

While these data indicate that farmers who use fertilizer generally found reading and hearing about fertilizer to be helpful, non-users generally did not think either was helpful. However, non-users did indicate exposure to published and broadcast information on fertilizer sufficient to influence their practices—if this material had been understood and believed, and seen as applying to their own operations.

★ ★ ★

Financing Fertilizers Shown as Important Factor in NPFI Survey

The farmer may be willing to borrow money to buy fertilizer, but this does not necessarily mean that he will actually do so, the NPFI survey indicated. It showed that about half of fertilizer purchases were paid for at the time of delivery. The other half was bought largely on short-term credit. 61% of all farmers (87% of high-level users) say they either would, or probably would, borrow to buy fertilizer if they didn't have money available and if credit could be had "at a reasonable rate of interest."

One-third of non-users say they would or probably would borrow to buy fertilizer even though an equal number gave lack of money as a reason for not using fertilizer. Even though more farmers apparently are willing to borrow money to buy fertilizer than do so, they seldom consult bankers on their fertilizer problems.

Most farmers apparently are not inclined to seek bank credit on their own initiative. To buy more fertilizer, farmers undoubtedly need an adequate source of credit. A greater effort is needed to encourage more banks and other lending institutions to make provision for necessary fertilizer in their production loan programs.

Availability of credit alone will not stimulate farmers to use proper amounts of fertilizer, however. The frequency with which "lack of money" is listed as a reason for not buying fertilizer probably in itself reflects a low level of conviction as to the benefits which may be derived. This is substantiated by the fact that many farmers say they would use fertilization rates only slightly higher than they now are using if they had plenty of money available.

"Therefore," concludes the NPFI, "efforts to improve the availability and use of credit are likely to be much more effective if a simultaneous effort is made to upgrade farmers' thinking as to optimum rates of fertilizer usage."

OREGON BULLETIN

CORVALLIS, ORE. — A new bulletin giving detailed information on the use of commercially applied pesticides in Oregon has been published by the Oregon State College experiment station. Titled, "Charges for Commercially Applied Pesticides," the new bulletin examines use of chemicals applied by commercial ground and air methods for the control of insects, weeds, and plant diseases. The study was prepared from daily reports of 19 commercial chemical applicators working in Willamette Valley, Columbia Basin, Central Oregon, and Snake River areas during the 1956 season. Different sections of the bulletin analyze use of control chemicals from the standpoint of crops and land use, pests treated and chemicals used. Commercial application of fertilizers and seed is also discussed.

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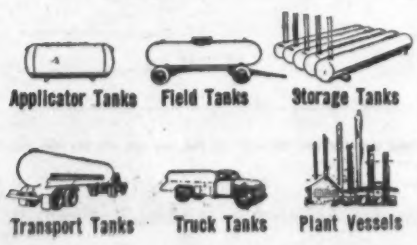

Parker S. Dunn

Parker S. Dunn, New AP&CC Board Member

LOS ANGELES—Parker S. Dunn, vice president, manufacturing, of American Potash & Chemical Corp., has been elected to the company's board of directors, according to an announcement by Peter Colefax, president. At the same time, the board was increased from eight to nine members.

Mr. Dunn joined AP&CC in 1951 as assistant vice president to head production at the company's main plant at Trona, Cal. Since then he has played a major role in the AP&CC chemical upgrading program. He was named vice president, manufacturing, in 1955 to head production at all company plants and was transferred to AP&CC headquarters at Los Angeles in 1956.

Prior to joining AP&CC, Mr. Dunn was with Potash Corporation of America at Carlsbad, N.M., for 10 years.

Russell B. Stoddard to Retire from Fairfield Div.

NEW YORK—Russell B. Stoddard, formerly manager of the Fairfield Chemical Div. of Food Machinery and Chemical Corp., is retiring from active service with the company, Dr. Carl F. Prutton, FMC executive vice president, has announced. Mr. Stoddard now will serve FMC on a part-time basis as a consultant in his specialty of pyrethrum chemicals and other pesticide materials and will devote himself to outside business interests as well.

Mr. Stoddard has been a driving force in the insecticide industry not only during the past four years with FMC, but with other major insecticide producers for more than 20 years. When he shifted his interest from essential oils to insecticides in the early 30's, Mr. Stoddard's first aim was to find a new source of rotenone root, then grown only in Malaya and Java. Due to his successful efforts, today's major source is Peru.

A few years later, seeing the advantages of pyrethrum as an insecticide, Mr. Stoddard turned his attention to the difficulties besetting this industry, including chronic short supply and a high and widely fluctuating price. About the time of World War II, research efforts at purifying pyrethrum, sparked by Mr. Stoddard, coincided with increased military need for insecticides. A further development, also pushed by Mr. Stoddard, was pyrethrum aerosol bombs based on purified, concentrated pyrethrum.

Interested in the possibility of making pyrethrum even more potent through synergism, Mr. Stoddard encouraged the research efforts that led eventually to discovery of piperonyl butoxide. Also interested in improving the source of supply of pyrethrum, grown chiefly in Africa, Mr. Stoddard encouraged experiments in growing it on the slopes of the Andes. In spite of obstacles, the attempt was successful. FMC's Fairfield Chemical Div. now obtains some of its pyrethrum flowers from plantations in Ecuador.

As a consultant with FMC's Chemical Divisions, Mr. Stoddard will be called on to contribute to various phases of FMC's insecticide program, which includes the manufacture of organic pesticide materials, the development and promotion of new applications in the insecticide field, and refinements in aerosol applications.

Diamond Sales Show Gain; Earnings Down

CLEVELAND—Diamond Alkali Co., Cleveland, showed a gain in dollar sales and a decline in earnings for 1957, it was reported by Raymond F. Evans, chairman and president.

Despite some softening in demand during the last half of 1957, sales of Diamond chemicals continued their upward trend to a higher figure for the fifth successive year, totaling $122,640,000 for the year, compared to $121,260,000 in 1956. Net income in 1957 amounted to $7,035,000 or $2.53 per share against the 1956 record net earnings of $10,380,000 or $3.73 per share, when adjusted to current shares oustanding—a 32% decrease.

Income for 1957, Mr. Evans said, reflects losses related to Black Leaf Products amounting to $905,000 or 32¢ per share, and a non-recurring charge in the amount of $150,000 or 5¢ per share, resulting from the adoption of the LIFO method of pricing finished goods inventories.

Commenting on the effect of Black Leaf operations on Diamond's earnings picture, Mr. Evans said, "After absorbing losses on Black Leaf operations for nearly three years, at year-end we sold the house and garden products line including inventories, production facilities and the Black Leaf trade name. This consumer products business depends for its success upon major merchandising and promotional effort. We had the alternative of substantially expanding our marketing activities in the consumer field or eliminating this activity which did not utilize to any important degree the particular technical skills and chemical knowledge we possess. We chose the latter course."

Maurice A. Christensen Joins Olin Mathieson

NEW YORK—Maurice A. Christensen has been named field representative for the plant food division, Olin Mathieson Chemical Corp. Lawrence S. Madsen, general manager western district, announced Mr. Christensen will service farm accounts with agricultural chemicals in the Chandler, Ariz. area.

Before joining Olin Mathieson, Mr. Christensen was agronomist for the Hanna Ranch in Chandler. Prior to that he had been with the Soil Conservation Service in the same city for five years.

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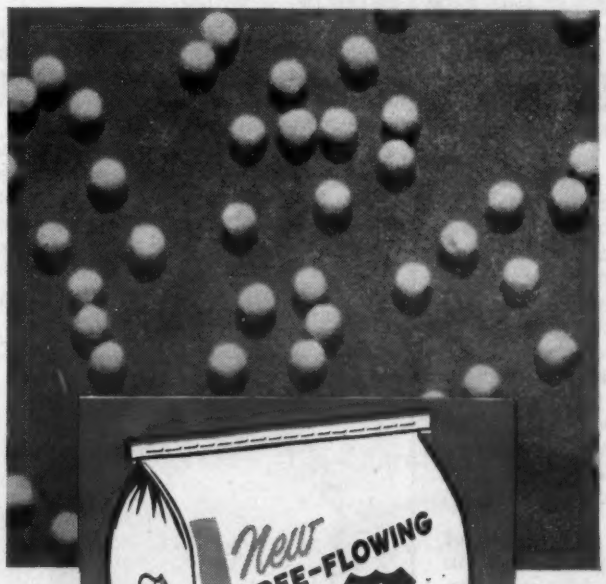

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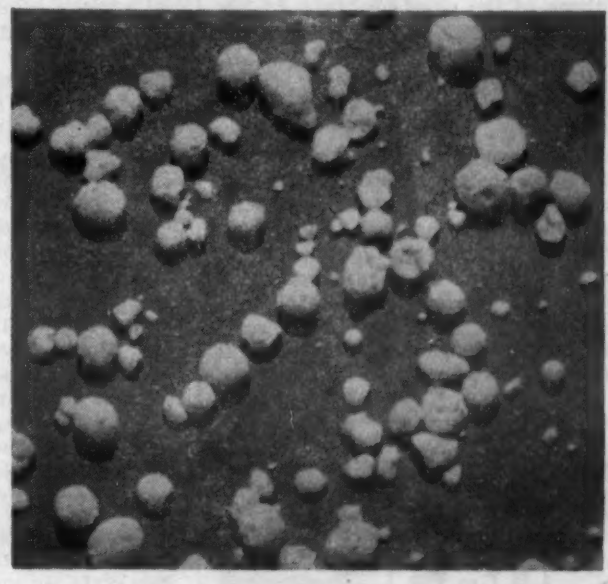

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PESTICIDE TALK—The two groups above are pictured during conversations at the recent New Mexico Pesticide Conference held at New Mexico A&M College. In the upper photo, left to right, are W. E. Timmons, Estancia; Dr. J. G. Watts, head of the New Mexico A&M experiment station botany and entomology department; C. H. Yates, Espanola; and Gale F. Hansen, National Aviation Trades Assn., Richmond, Cal. Below, participants in the conference chat during an intermission. They are A. E. Triviz, A&M associate extension director; Clayborne Wayne, Farmers Market and Supply Co., Hatch; Howard Stroup, Artesia; and Richard S. Neilson, American Cyanamid Co., Scottsdale, Ariz.

NEW MEXICO MEETING

(Continued from page 1)

should become more familiar with the action of chemicals." He cited the high cost of training pilots, the congested air space and collision risks as three of the chief problems in the crop dusting field.

Dr. Robert H. Black, dean and director of agriculture at New Mexico A&M College, said that increased research holds the key to enabling America to increase its agricultural production to meet rising demands for food products and fibers which have been set up by the steady growth of the nation's population. Dr. Black spoke on "The Future of Agriculture and Agricultural Chemicals." He said: "The inability to keep up with increased demands for food and fibers arising from population growth is due to inadequate technological advancement. We must work to bring our products up to a point where we can support our growing population and supply other nations with food and fiber. Continued research will help us achieve this aim. Continued research will enable us to uncover new facts and re-evaluate old facts which have lain dormant and unexploited."

Clayborne Wayne, Farmers Market & Supply Co., Hatch, N.M., went on record as advocating the formation of a state organization for pesticide, insecticide and herbicide dealers.

Livestock and livestock products were worth $119,853,714 in 1956 to New Mexico livestock growers. The next most important crop, cotton, returned $69 million the same year, showing how important a part livestock plays in the economic picture of agriculture in New Mexico, Dr. R. C. Dobson, A&M entomologist, said.

"To illustrate the importance of the insects attacking livestock in this state we will consider only one insect, the horn fly," he said. "This insect caused an estimated $3¼ million loss on the cattle shipped out of the state in 1956. If we consider the number of cattle in the state and try to figure losses on them as well, the figure becomes astronomical."

Dr. Harold W. Wiedman, A&M plant pathologist, talked about seedling diseases of cotton during a panel on cotton pests. He said that in some areas of the Cotton Belt the application of a fungicide or a mixture of fungicides as a spray or dust in the seed furrow at planting time has proved helpful in reducing both pre- and post-emergence damping-off by prolonging the effect of seed treatment and providing a "treated zone" through which seedlings may emerge. The efficiency of the in-furrow treatments depends on several variable factors, including methods of application, prevalence of the pathogens, soil temperature, and others, Dr. Wiedman said.

Dr. Harold G. Hedrick, A&M plant pathologist and another member of the cotton panel, said that most fungicides for the control of verticillium wilt of cotton are in the experimental stage. However, he said, Larvacide, a compound containing chloropicrin, has shown great promise in giving control of this soil borne disease in field experiments at New Mexico A&M.

"Until the cost of applying such a chemical and other factors can be worked out more satisfactorily, there is no available data at present for recommending a specific fungicide in the control of verticillium wilt of cotton," Dr. Hedrick said.

A report on nematode damage was given by Dr. Don J. Morton, A&M nematologist. He said that this pest has been found in Dona Ana County along the Rio Grande, Luna County near Deming, Valencia County near Tucumcari, Roosevelt County around Portales, Torrance County in Mountainair and Willard, Lea County near Lovington and Eddy County in parts of the Pecos Valley.

The infestations in Dona Ana, Luna, Valencia and Roosevelt counties have been particularly severe, and have warranted extensive use of control measures, Dr. Morton said.

Also on the program were panel discussions of pests of vegetables, fruit and ornamentals and greenhouses. The conference was held under the sponsorship of the New Mexico A&M Experiment Station, the Extension Service and the New Mexico Department of Agriculture.

JOINT MEETING

(Continued from page 1)

lege agronomist, told the group that corn yields as high as 150 bu. an acre have been obtained with irrigation on fertilized fields when a late-maturing hybrid variety was used experimentally.

The tests, made at the irrigation experiment field near Concordia, Kansas, and on various farmer-cooperator sites in the Kansas River valley of Eastern Kansas, showed deficiencies of nitrogen, phosphate and potash in various areas.

The use of 25 to 50 lb. nitrogen an acre for small grain production is recommended in Eastern and Central Kansas, he said. For corn and grain sorghums, 40 to 80 lb. an acre of nitrogen is recommended under favorable dry-land conditions.

"Phosphate, potash and lime recommendations are based, wherever possible, on specific soil test findings," Dr. Smith said. "Continued attempts are being made to improve correlations between soil test findings and actual field results."

He added that various forms of nitrogen fertilizer give equally good results in increased yields of wheat. Spring or fall applications are similarly effective, he said, because leaching of nitrogen is not an important problem in Kansas. The agronomist added that tests indicated water solubility of phosphate is not significant in determining the effectiveness of fertilizer for small grains.

Dr. H. J. Mederski, Ohio State University agronomist, declared in his talk, that soil fertility can be built up to such a high level that heavy row fertilization for crops is unnecessary. This statement, he said, is based on results of tests for the past several years to determine the response of crops to various systems of fertilization.

"In some tests," he said, "we have compared fertilization systems in which a fixed amount of phosphate and potash was applied over a five year period. In one case, only small amounts of starter phosphate and potash were used annually in combination with large amounts of bulk-spread nutrients.

"In the second case," he said, "the same total quantity of fertilizer was

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GRAND RIVER APPOINTMENTS—Appointments of two men in the sales department of Grand River division of Deere & Co., Pryor, Okla. have been announced by John R. Taylor, Jr., sales manager. Stafford L. Beaubouef has been named to the position of Southern sales supervisor, and will make his headquarters at the plant's general offices in Pryor. Rush E. McCarty has been appointed to replace Mr. Beaubouef as sales representative for the company's nitrogen products in the Arkansas, Louisiana and East Texas area. Mr. McCarty is a graduate in agronomy from Louisiana State University and has additional training in animal husbandry and advertising. He has also been employed as a senior field officer for the Louisiana agriculture, stabilization and conservation committee, and previous to joining Grand River was employed by the Delta Pine Land Co. of Scott, Miss. Mr. McCarty will reside in Shreveport, La.

applied, but it was equally distributed among each crop each year.

"Results indicate that the total crop yields from the two systems of fertilization are essentially the same.

"We have also found the yield increase from row fertilization became smallest as the fertility level in soil increases. These and other studies indicate that we are able to build or increase the soil's fertility level to the extent that heavy row fertilization is unnecessary."

The new wheel track method of planting corn on freshly plowed ground without harrowing and disking can save farmers considerable time, labor, fuel and machinery costs, Dr. A. E. Peterson, University of Wisconsin soils specialist, reported. Another advantage is that wheel track planting can reduce soil erosion and produce crops more efficiently, he declared.

Dr. Peterson said that in practically all cases, yields of wheel track-planted corn have been equal to or higher than those grown with conventional seed bed preparation.

Wheel-track corn yielded 123 bu. compared with 116 bu. grown by conventional tillage at the LaCrosse soil conservation station, he said.

With the wheel track method, the field can be plowed and planted the same day. "The planter is pulled behind the tractor and the corn is planted in the tractor wheel tracks."

Among additional advantages of wheel track planting outlined by Dr. Peterson were that minimum tillage helps maintain soil moisture, more moisture soaks into the field and runoff is reduced. Corn will germinate uniformly, particularly in dry years, he said. The freshly-plowed furrow usually contains enough moisture so the seed germinates rapidly.

Weed control is more efficient, also. With wheel track planting, the corn and weed seeds in the row begin to germinate at the same time, while weed seeds in the loose soil between the rows remain dormant. Therefore, the corn is usually 6 to 12 in. high before cultivation is necessary, he reported. A weed spray broadcast or over the wheel track delays this first cultivation even futher and may entirely eliminate cultivation for weed control. "However, wheel track planting is not a cure-all for corn production problems," he added. "Good cultural practices must be followed, corn variety must be adapted to the area, and soil tests should be used to make sure adequate amounts of starter fertilizer and sidedress fertilizer are applied."

Economic factors are becoming increasingly important to soils specialists in making recommendations to farmers for fertilizer use, Dr. John Pesek, Iowa State College agronomist, declared in his address.

Dr. Pesek cited Iowa tests as an example of how the "optimum" and "minimum" rates work out.

In one test, an "optimum" rate investment of $17.70 per acre in 108 lb. nitrogen fertilizer for corn returned $25.80 an acre profit—or a 146% increase. Application rates above this level reduced the per-acre profit from fertilizer use and the percentage of profit on the investment.

In the same test, the "minimum" recommended rate of 44 lb. nitrogen at $8.10, returned only a $16.20 profit an acre. When the fertilizer application rate went below the minimum rate, there was a decrease in the profits per acre as well as the return on the investment.

Farmers are being urged to shift as rapidly as possible from old fashioned split-boot corn fertilizer attachments to single band placement equipment which puts the fertilizer to one side and below the seed, Dr. E. R. Duncan, Iowa State College extension agronomist, declared.

In his report, Dr. Duncan cited these reasons why efforts should be made to shift from the present attachments to improved types:

1. It would virtually eliminate present problems of injury in germination to seed.
2. It may make it possible to apply all needed fertilizer with the improved types of attachments, where soil tests indicate fairly adequate fertility levels.
3. More efficient use of commercial fertilizer can be expected, due to somewhat deeper placement.
4. Placement of the fertilizer is less variable and less dependent on soil conditions.
5. Improved equipment will make it possible to apply the most suitable fertilizer ratio for the crop, regardless of the soluble salt content.
6. Rates of application of fertilizer can be more accurate with improvements in the design of hoppers and delivery mechanisms.

Dr. Duncan said complaints registered against the new equipment appear mostly to be due to faulty equipment or inadequate knowledge by farmers in adjusting the implements.

"The points in favor of the single band method of placement to one side and below the seed," he said, "appear to easily outweigh the points against this method."

A twofold program to help farmers realize the yield producing potentials they can get for each of their major crops was disclosed by Charles E. Trunkey, U.S. Industrial Chemicals (formerly with the National Plant Food Institute), in his report.

This "Production Potentials" program, said Mr. Trunkey, is designed to: 1—Give a farmer specific information on cultural practices that can make his farming operations more profitable; and 2—Give him equally effective information to convince him that a better crop producing job is possible on his farm.

The program is based on the assumption that farmers should know the crop producing potentials in their soils if they do want to get high yields, he said. In this way, unit costs of production can be spread so that a good profit margin can be obtained on each bushel, ton or pound. The production potentials would supply information for individual farmers.

Sessions were in charge of Dr. A. J. Ohlrogge, Department of Agronomy, Purdue University, chairman of the Middle West agronomists, and Dr. William P. Martin, head, department of soils, University of Minnesota, St. Paul, newly-elected chairman.

A series of television visuals, designed to bring the story of soil fertility and the use of fertilizer to the public via this medium, was shown during the afternoon session of February 13.

Richard E. Bennett, president of the former Middle West Soil Improvement Committee and president of Farm Fertilizers, Inc., Omaha, Neb., and Dr. Russell Coleman, executive vice president of the National Plant Food Institute, Washington, D.C., welcomed the conventioneers at the opening sesion.

New from Du Pont...

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A Uramon® Ammonia Liquor containing ammonium sulfate for improved manufacturing and agronomic properties

Now, Du Pont offers a "Uramon" Ammonia Liquor containing ammonium sulfate. This new urea-ammonia solution, called UAL-S, combines two efficient forms of nitrogen with ammonium sulfate to provide added sulfur . . . an essential plant nutrient with recognized agronomic value.

All fertilizers benefit from nitrogen derived from UAL-S. Regular mixtures cure well, are free-flowing and resist caking. In granular mixtures, UAL-S aids in producing good yields of hard, round, firm granules that store and distribute well.

UAL-S is safe—handles at moderate pressure and there's no danger of flash fires. It's non-corrosive to fertilizer manufacturing equipment, including mild steel and aluminum. UAL-S has a low freezing point, too . . . can be stored year round in most areas.

Du Pont specialists can give you at-the-plant advice on proper use of UAL-S in your fertilizer mixtures. They stand ready to assist you in profitably formulating mixtures containing UAL-S. For further information on UAL-S, and to request the services of one of Du Pont's specialists, write the nearest office.

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BETTER THINGS FOR BETTER LIVING ... *THROUGH CHEMISTRY*

Croplife®

A WEEKLY NEWSPAPER FOR THE FARM CHEMICAL INDUSTRY

The regional circulation of this issue is concentrated in the Southern states.

SURVEY TELLS STORY . . .

Big Sales Potential Shown in NPFI Report

A GREAT quantity of food for thought is contained in the National Plant Food Institute's report on results of the survey it made recently through an independent agency. In fact, the calories contained in the diet of "food for thought" are so numerous that it seems entirely possible for the industry to fatten itself from a little serious indulgence in this helpful information.

Frequently characterized as a most unusual type of humanity, the industry's customer, the farmer, reveals many things about himself in the way he replies to survey questions. He is seen as an independent thinker, a hard-to-convince personality, possessive of a contradictory nature, and a potential user of vastly increased amounts of plant food.

The survey enables the industry to reappraise its efforts and bring into sharper focus its sales plans in accordance with the facts as brought forth. A general sharpening and greater use of old tools are indicated, with soil tests and demonstration plots revealed as important "convincers" of a need for additional applications of plant food.

A continuing effort of education is apparently needed, too, as shown by the farmer's apparent confusion about how grades and ratios of mixed fertilizers are made up. His dependence upon the fertilizer dealer is shown as a major factor in decisions about what to purchase in the way of plant food.

The industry could well take to heart some of the statistics coming out of the survey indicating that only 11% of all farmers use fertilizer on their two most important crops at rates even approaching those recommended by their state experiment stations.

It was pointed out that 37% of all farmers used no fertilizer on either of their first or second most important crops. All other farmers interviewed (52%) used fertilizer at rates much less than considered adequate for the type of crop and soil involved. Of all those using fertilizer on their most important crops, 50% used less than 250 lb. an acre, the results indicated.

Two-thirds of all farmers think it would be a "good idea" to fertilizer pasture and forage crops, and give positive reasons for their belief. Despite this favorable attitude, however, only 12% of the acreage of these crops actually is fertilized.

These are encouraging words, but they bear the strong suggestion that a major effort must be made to bring this potential into reality.

• • •

Years Ahead Look Good

How predicted events on U.S. farms in 1958 will affect agricultural supply firms has been outlined in a recent bulletin from the Farm Equipment Institute, Chicago. Here are some of the factors that FEI expects to see develop during the remainder of this year and in subsequent years:

United States farm income in the year ahead will continue near present level, but the total agricultural output probably will increase about ⅓ by 1975.

In the period ahead both a higher absolute amount and a higher proportion of the total gross income of agriculture will go for farm equipment and supplies.

Two types of markets will tend to develop: The commercial family farm market and the rural resident or "backyard farmer" market.

The size of the commercial family farm will continue to increase and the number of livestock enterprises per farm will decrease. This will make it possible to have larger livestock enterprises which can be mechanized more profitably.

Agricultural output will increase more in humid and irrigated areas where technology can be more easily applied than in the more arid areas. A larger proportion of farm output will be produced to specification and sold under contract. Integration will play an important role in achieving this change.

Other contractual arrangements, including producer bargaining associations and marketing orders, will be employed.

The added capital necessary to keep the commercial family farm up to date will bring to the front again the problem of financing in agriculture. Credit and servicing of equipment will be bigger factors in the farmers' purchasing considerations in the period ahead.

The commercial family farm operators will take on more of the characteristics of the managers of the small industrial plants in the city.

"Chemical" Fertilizers Get Acclaim from Professor

Fertilizer manufacturers, dealers, and salesmen frequently run into situations where people are reluctant to buy and use manufactured plant nutrients because they think that "chemical" fertilizers have a deleterious effect on the soil and on the plant's nutritious qualities.

That such ideas simply aren't true has been pointed out by Oscar A. Lorenz, University of California, and vice chairman of the statewide department of vegetable crops. People who believe that chemical fertilizers "poison the soil, create unfavorable soil conditions, and damage the health of humans and livestock who eat plants grown with the chemical nutrients, are incorrect," he declares.

Actually, organic matter has no magical or unique properties so far as plant nutrition is concerned, he adds. So long as a plant gets the nutrients it needs, it doesn't know or care what the original source is.

The University scientist regards as illogical the assertion that human or animal life may suffer from chemical fertilizers. "It doesn't stand up to the fact that countries such as the United States, Sweden, and Denmark, where chemicals are widely used, have high average longevity. Surely this would not be so if chemical fertilizers were poisoning either the crops or the soils on which the crops are grown.

"Organic matter does impart some very desirable properties to soil," Mr. Lorenz adds. "It can make light-textured soil heavier and a heavy-textured soil lighter. It can act as a nutrient storehouse, releasing a steady supply of phosphorus, potassium, and nitrogen.

"But even organic nitrogen must first be changed to inorganic before plants can use it. Practically all of the nitrogen is absorbed by plants in either the nitrate or ammoniacal forms.

"Experiments over 100 years in England have shown almost identical yields for plots fertilized organically and chemically," he said. "This proves that chemical fertilizers can have no serious deleterious effects on soil. Animal feeding tests have proved that chemical-grown plants are as nutritious as those grown in organic material."

Croplife's Home Office

Croplife

BPA — *Member of Business Publications Audit*

NBP — *Member of National Business Publications*

CROPLIFE is a controlled circulation journal published weekly. Weekly distribution of each issue is made to the fertilizer manufacturers, pesticide formulators and basic chemical manufacturers. In addition, the dealer-distributor-farm adviser segment of the agricultural chemical industry is covered on a regional (crop-area) basis with a mailing schedule which covers consecutively, one each week, four geographic regions (Northeast, South, Midwest and West) of the U.S. with one of four regional dealer issues. To those not eligible for this controlled distribution Croplife subscription rate is $5 for one year ($8 a year outside the U.S.). Single copy price, 25¢.

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MEETING MEMOS

March 25-28—Minnesota Seed & Fertilizer Dealer Meetings, Sponsored by the University of Minnesota; Gullickson's Cafe, Tracy, March 25; Porter Hotel, St. Peter, March 26; Hotel Albert, Albert Lea, March 27; Legion Hall, Winona, March 28.

EDITOR'S NOTE: The listings above are appearing in the Meeting Memos for the first time this week.

Feb. 25-26—Seventh Annual South Carolina Pesticide Chemicals School, Clemson House, Clemson College.

Feb. 25-27 — Agricultural Chemicals Conference, Texas Technological College, Lubbock, Texas.

Feb. 26-27—Seventh Annual Ohio-Indiana Agricultural Aviation Conference, Ohio State University, Columbus, Ohio.

Feb. 28—Conference on Proposed Forest Soils Fertilization Research, Sonora Inn, Sonora, Cal.

March 4-5—Western Cotton Production Conference, Hotel Cortez, El Paso, Texas, Conference Sponsored by the National Cotton Council and the Five State Cotton Growers Assn.

March 10—Fertilizer Dealers' Day, Chehalis, Wash., sponsored by the Pacific Northwest Plant Food Assn. in cooperation with Washington State College.

March 10-11—Central Midwest District Pest Control Meeting, Town House Hotel, Kansas City, Kansas, Robert R. Schendel, Schendel Pest Control, 1018 E. 6th St., Topeka, Kansas, General Chairman.

March 13-14—Oregon Feed & Seed Dealers Assn., Annual Convention, Multnomah Hotel, Portland, Ore.

March 18-19—South Dakota Weed & Pest Control Conference, City Auditorium, Miller, S.D.

March 18-20—Western Weed Conference, Hotel Davenport, Spokane, Wash.

March 20-21—Pest Control Operators Conference, Michigan State University, East Lansing, Mich.

March 26-28—North Central Branch Entomological Society of America, Annual Conference, Sheraton-Jefferson Hotel, St. Louis.

April 13-15—Sixth Annual California Fertilizer Conference, California State Polytechnic College, San Luis Obispo, Sidney H. Bierly, 475 Huntington Drive, San Marino 9, Cal., General Manager.

April 17-19—California Hay, Grain & Feed Dealers Assn. Annual Convention, Ambassador Hotel, Los Angeles.

April 22 — Western Agricultural Chemicals Assn., Spring Meeting, Hotel Biltmore, Los Angeles; C. O. Barnard, 2466 Kenwood Ave., San Jose 28, Cal., executive secretary.

April 30 — Manufacturing Chemists' Assn. Precautionary Labeling Conference, Shamrock Hotel, Houston, Texas.

May 22-23—Soil Science Society of North Carolina, First Annual Meeting, Williams Hall, North Carolina State College, Raleigh, N.C.

June 9-11—Association of Southern Feed & Fertilizer Control Officials, Heart of Atlanta Motel, Atlanta, Ga., Bruce Poundstone, University of Kentucky, Lexington, Ky., Secretary-Treasurer.

June 15-18—National Plant Food Institute, Annual Meeting, Greenbrier Hotel, White Sulphur Springs, W. Va.

June 25-27—Pacific Branch, Entomological Society of America, San Diego, Cal.

July 8-10—Pacific Northwest Plant Food Assn., Ninth Annual Regional Fertilizer Conference, Pocatello, Idaho.

July 18-19—Southwest Fertilizer Conference and Grade Hearing, Buccaneer Hotel, Galveston, Texas.

Oct. 22-24—Pacific Northwest Plant Food Assn., Annual Meeting, Gearhart, Ore., Leon S. Jackson, P.O. Box 4623, Sellwood-Moreland Station, Portland, Ore., secretary.

Oct. 28-29—Northwest Garden Supply Trade Show, Masonic Temple, Portland, Ore.

Oct. 29-31—National Agricultural Chemicals Assn., 25th annual meeting, Bon Air Hotel, Augusta, Ga.

Nov. 9-11—California Fertilizer Assn., 35th Annual Convention, Ambassador Hotel, Los Angeles, Sidney H. Bierly, 475 Huntington Drive, San Marino 9, Cal., General Manager.

Dec. 3-5—Agricultural Ammonia Institute, Annual Meeting, Morrison Hotel, Chicago, Jack F. Criswell, Claridge Hotel, Memphis, Executive Vice President.

Jan. 20-22, 1959—California Weed Conference, Santa Barbara, Cal.

Oregon Sales Reach New High in 1957

SALEM, ORE. — Oregon farmers used a little more fertilizer in 1957 than in any other year on state record. Tonnage fee reports made to the Oregon Department of Agriculture show 183,719 tons were sold, or 701 tons more than in 1956, the previous high year.

Sale of liming materials in 1957 decreased more than 4,000 tons from the 1956 total, or 49,382 tons compared with 53,774 in 1956. Total sale of 15,197 tons of agricultural minerals in 1957 was lower by 3,087 tons than the all-time record established in 1956.

CALENDAR FOR 1958-59

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Dr. Harvey J. Stangel

CHIEF AGRONOMIST — Nitrogen Division, Allied Chemical & Dye Corp., has appointed Dr. Harvey J. Stangel to the newly-created position of chief agronomist. Dr. Stangel was employed by Nitrogen Division in 1953 upon his graduation from the University of Wisconsin. Since 1954 he has been midwest agronomist, with offices at Omaha. In his new position, he is located at Nitrogen Division's main office in New York City.

Cold Weather Delays Planting in Texas

AUSTIN, TEXAS—Cold weather and too much moisture have delayed planting in many parts of southern Texas. Rice plantings in particular have had to be postponed because of inclement weather, while in the West Texas oat planting has been delayed in many areas because of wet fields. Several sections which plant oats in October and November did not plant at all because of muddy fields.

In some parts of Central Texas small grain crops have been growing very slowly. Authorities say this may be due to a lack of nitrogen.

In the same area farmers are now putting down fertilizer before planting vegetables. Likewise some winter fertilization had been done on irrigation cotton land, though this practice has not yet become common.

In every part of Texas except in the north Panhandle, moisture conditions are better than in many years. Subsoil moisture has been found at depths of six feet or more in some counties.

With a good bottom season assured by planting time, many farmers hope to give their hard-used irrigation wells a few rest periods during 1958.

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Classified advertisements accepted until Tuesday each week for the issue of the following Monday.

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All Want Ads cash with order.

WILLIAM F. CARROLL DIES

SAN FRANCISCO—William F. Carroll, agricultural commissioner for the city and county of San Francisco since 1932, was found dead at his home recently. Death was apparently due to a heart attack. Mr. Carroll headed the little known staff of seven inspectors who check both wholesale and retail fruit and vegetable stores, plant nurseries and commercial truck gardens to enforce sanitation standards and guard against plant infection.

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How Hercules Helps Promote Your Service Facilities

Naturally we are interested in selling toxaphene. But we also want to assist in promoting the many unselfish service facilities now being provided by leading insecticide suppliers. That's one of the reasons why this year's Hercules advertising campaign is primarily devoted to a better understanding of insecticide usage.

More than one million farmers will be reading ads such as these in "Progressive Farmer," "Farm & Ranch," and other farm publications. In addition, local radio and television programs and the numerous dealer aids available from Hercules can help make you an even better friend of the customers you serve. It is our hope that Hercules' promotional activities will be of direct value to you.

Questions and Answers About Cotton Insecticide Usage

Q ***Is there a trend toward earlier planting?***

To some extent, but the important trend is toward early *production.*

Q ***Aren't early planting and early production the same thing?***

Not necessarily. For example, early control of insects can be a big step toward early production even if planting is done at what you consider the regular time.

Q ***Why is that?***

Anything that slows down the natural growth cycle of cotton interferes with early production. Early control of insect pests is essential to promote the vigorous, healthy growth of plants. That's why early control is an important part of any well planned insecticide program.

Q ***Is it true that the more insecticide I use the more efficient my control program will be?***

No. When you use toxaphene, for example, you will find that the most economical and efficient program is based on an intelligent use of the insecticide in recommended dosages. Excessive usage is uneconomical and unnecessary.

Q ***Does early production increase my profit?***

Many farmers have found that they get a better price for cotton that's produced early. Buyers appreciate that early cotton is clean, free from trash, and has better lint quality. But even more important, early production protects you from late-season insect pests.

Q ***Do I need help in planning my insect control program?***

Few farmers would claim to be entomological experts. You should seek the best help you can get.

Q ***Where can I get help?***

In addition to the usual sources, help is available from the best insecticide suppliers who are placing trained entomologists on their staffs to aid the farmer. Shop for this kind of service. Without it you are getting less than you are paying for in your insecticide purchases.

Q ***Is it possible to sum up the steps successful planters will be taking in 1958?***

The following, at least, will be part of their program: a *regular* insect control program with *real* guidance from the insecticide supplier; emphasis on *proper* use of insecticides; insistence on quality insecticide formulations; and a greater effort toward early production of cotton.

Presented in the interest of better insecticide usage by

Agricultural Chemicals Division

HERCULES POWDER COMPANY INCORPORATED

900 Market Street, Wilmington 99, Delaware

Manufacturers of technical toxaphene

NX58-4